Construction News

★Denotes work advertised in ENGINEERING NEWS.
✚Denotes contract awarded. The names of bidders awarded contracts are set in CAPITALS.

MORE HIGHWAY CONSTRUCTION THAN EVER

Preparations have been made by several states to spend more money than ever before for state highways or aid to counties in constructing improved roads. In some states the movement is just under way, but from practically every section of the Union there is a disposition to spend large sums of money in building new roads. In California about a third of the $18,000,000 bond issue will be spent this year. In West Virginia it is planned to spend about $4,000,000, while Kentucky will spend a like amount. Ohio, where there is now $8,000,000 of road work under contract, will spend $2,000,000 more and in New York $15,000,000 will be spent. In a few of the states no direct state aid has been given but the counties are exerting themselves toward securing financial aid for road improvements. A compilation is given below of the sum which will be spent by the several states and the officials in charge of highway work:

Maine—Chief Engineer State Highway Commission, Paul D. Sargent, Augusta. I. W. Barbour, Asst. Engr., P. L. H. Hardison Asst. Engr., A. J. Wiggin Supt. of Maintenance. There will be an appropriation of $500,000 by state. The state and counties will also contribute $300,000 each for state aid roads.

New Hampshire—State Superintendent of Highways, Chase R. Whitcher, Concord. Will spend $275,000 for highways during the year.

Massachusetts—State Highway Commissioners, William D. Sohier, Boston, Frank D. Kemp, Springfield, James W. Synan, Pittsfield. Chief Engineer, Arthur W. Dean, Winchester. About $2,500,000 will be spent for road construction during the year.

Vermont—State Highway Commissioner, Stoddard B. Bates, Franklin, Vt. An expenditure of $450,000 for highways is contemplated during the year.

Rhode Island—Engineer State Board of Public Roads, Irving W. Patterson, Providence. No appropriations made for constructing new roads this year, only for maintenance of roads already constructed.

Connecticut—State Highway Commissioner, Charles J. Bennett; Deputy Highway Commissioner, Richard L. Saunders (in charge of construction), Highway Superintendent, W. LeRoy Ulrich (in charge of repairs and maintenance). Appropriation of $1,000,000 has been made for highways.

New York—State Engineer and Surveyor, Frank M. Williams; Deputy Engineer, H. E. Breed, both of Albany. The Legislature has appropriated $10,000,000 for new state highways. It is expected that $3,500,000 will be allowed for repairs and maintenance and that $1,500,000 will be spent for the construction of highways by state and county aid.

New Jersey—State Highway Engineer, R. A. Meeker; State Road Commissioner, E. A. Stevens, both of Trenton. About $500,000 will be spent for highway construction during the year.

Pennsylvania—State Highway Commissioner, Edward M. Bigelow; Chief Engineer, Samuel D. Foster, both of Harrisburg. No appropriations made as yet for highway construction.

Delaware—State Highway Commissioner and Engineer Newcastle County, James Wilson, Wilmington. The counties (three) can draw $10,000 each from the State Treasurer provided each county raise and spend $20,000 for highway construction.

Maryland—Chief Engineer State Roads Commission, Henry G. Shirley, Baltimore. An expenditure of $2,000,000 for highway work is planned.

Virginia—State Highway Commissioner, G. P. Coleman; Asst. Commissioner, C. B. Scott, both of Richmond. About $1,750,000 has been appropriated for highway construction.

West Virginia—Chief Road Engineer, A. D. Williams, Morgantown, W. Va., Kanawha County, L. C. Massey, Clk., has advertised for and will receive bids on 17½ miles of hard surface (road) construction up until April 10. They have called for a bond issue to be voted on April 24, for $350,000 to cover this construction. Marshall County, T. J. Bartrug, Engr., Moundsville, will spend $50,000 on macadamized roads and bonds have been voted. Wetzel County, Grant District, will spend $90,000 on grading, Blake Taylor, Engr., Jacksonburg. A bond issue is called in Lincoln District, Marion County, J. Russell Wilson, Engr., Washington, Penn. Work heretofore contracted in Fairmont and Mannington Districts in Marion County, which have voted $700,000 in bonds, will be completed this year. Ohio County will spend $170,000 on road construction. Wayne County will construct 2½ miles of brick road between Cabell County line and Kenova. A $500,000 bond issue is contemplated in Logan County and petition for a $600,000 bond issue has been filed in Mercer County, George Hilmon, Princeton, Engr. A bond issue of $165,000 was voted on Mar. 20, in Big Creek District, McDowell County. W. J. Welch, Engr. A $47,500 bond issue is being contemplated in Lubeck District, Wood County, Burdette Woodyard, Engr., Parkersburg. There will be spent during the year in the state on roads in addition to the above, approximately $2,000,000, and approximately $600,000 will be spent on bridges.

North Carolina—State Geologist and State Highway Commissioner, Joseph Hyde Pratt, Chapel Hill. An appropriation of $10,000,000 for state highway work is expected.

South Carolina—There is no state highway work. In most cases the roads of several counties are managed by County Commissioners.

Georgia—State Highway Engineer, T. P. Stanley, Atlanta. The State does not appropriate any money for highway construction, but allows each of the counties to use the convicts who are able to do manual labor. The counties appropriate the needed funds for the construction and maintenance of roads.

Florida—The Boards of County Commissioners of the respective Counties attend to the construction and maintenance of roads.

Alabama—State Highway Engineer, W. S. Keller; Asst. State Highway Engineer, R. P. Boyd, both of Montgomery. About $400,000 will be spent for state aid roads.

Mississippi—No State Highway Commission. The Boards of Supervisors of the various counties authorize the Supervisors Districts to issue bonds for road improvement in the district.

Louisiana—Chief State Engineer, Frank M. Kerr; State Highway Engineer, W. E. Atkinson, both of New Orleans. The State will spend $150,000 for road construction.

Kentucky—State Commissioner of Public Works—Robert C. Terrell; First Asst. Highway Engineer, R. H. Reese, both of Frankfort. An additional tax of five cents will net about $600,000 which will be apportioned to several counties, the state paying half and the county, half. In addition five counties have voted bonds aggregating $1,500,000 and 13 other counties will vote on $2,015,000.

Tennessee—County Engineer, E. G. Buck, Jackson, Tenn. No definite amount has been appropriated for road construction. The General Assembly proposes to enact laws providing for a State Highway Department and to improve roads on the state aid plan.

Ohio—State Highway Commissioner, Clinton, Cowen, Columbus. About $2,250,000 has been appropriated for road construction. Approximately $8,000,000 worth of road work is now under contract.

Indiana—County Engineer, C. E. Cheney, Indianapolis. Road work is not done by the State but by the township within which the road lies. Townships of Marion County will spend about $200,000 on the construction of new roads this year, and the County will spend about $150,000 on the maintenance of existing roads.

Michigan—State Highway Commissioner, Frank F. Rogers, Lansing. No appropriations made as yet for road construction.

Illinois—Chief State Highway Engineer, William W. Marr, Springfield. The State will spend $1,000,000 for road work this year.

Wisconsin—Chief Engineer, Wisconsin Highway Commission, A. R. Hirst, Madison, Wis. About $4,000,000 will be spent for road work this year. One third of this amount will be furnished by the State and two-thirds by the Towns and Counties.

Iowa—Highway Engineer, Thomas H. MacDonald, Des Moines.

Minnesota—State Engineer, George W. Cooley; Deputy State Engineer, J. H. Mullen, both of St. Paul. The State will spend about $1,500,000 for road work this year.

Kansas—State Engineer, W. S. Gearhart, Manhattan.

Nebraska—State Engineer, Donald D. Price, Lincoln. No appropriations have been made for road work.

South Dakota—State Engineer, Homer M. Derr, Pierre, S. D. There is no state fund for highway work, but $1,229,000 has been levied by the various counties.

North Dakota—State Engineer, Jay W. Bliss, Bismarck, N. D. There is no state supervision of highway construction in this state. The Highway Commission acts as an advisory board. No appropriations have been made for road work.

Wyoming—State Engineer, J. B. True, Cheyenne, Wyo. No direct expenditures for road work by the State but the Counties will spend about $400,000.

Missouri—State Highway Commissioner, Frank W. Buffum, Jefferson City, Mo.

Texas—State Reclamation Engineer, Arthur A. Stiles, Austin, Tex. Roads are built by the various counties.

Colorado—Engineer Roads and Bridges, J. E. Maloney; State Highway Commissioner, T. J. Ehrhart, both of Denver. About $200,000 will be spent by the State and $1,500,000 by the Counties for constructing and maintaining roads this year.

New Mexico—State Engineer and State Highway Commissioner, James A. French, Santa Fé, N. M. The State will spend $120,000 and the counties, $400,000, for the construction of roads this year.

Utah—State Engineer, W. D. Beers; State Road Engineer, E. R. Morgan, both of Salt Lake City. The state plans to spend $500,000 or over for road work during the year.

Nevada—State Engineer, W. M. Kearney, Carson City.

Arizona—State Engineer, Lamar Cobb, Phœnix, Ariz. An appropriation of $396,000 has been made for road work this year.

Washington—State Highway Commissioner, William R. Roy; Chief Engineer State Highway Commission, James Allen, both of Olympia. The State Legislature has appropriated $2,150,288 and re-appropriated $153,640 for the construction and maintenance of state highways and $4,000,000 for the con-

struction and maintenance of other permanent highways. In addition the various counties will spend about $4,000,000 for constructing roads and bridges. The above does not include any expenditures that may be made within the limits of incorporated cities or towns.

California—State Engineer, W. F. McChue; Highway Engineer, Austin B. Fletcher. The state will spend about $5,000,000 this year on highway improvements.

PRICE CHANGES AND THE BUSINESS OUTLOOK

Construction work looks more promising than for many months, but there has been such a dearth of anything like normal construction for at least seven months that contractors are hungry for work, and are taking it at extremely low figures. It is evident that a good deal of work will come out later in the year, particularly by municipalities who have been advised to postpone construction, and much of this will necessarily be at materially higher prices. It seems evident that more concrete road construction will be done this year than ever before. The low cost of other materials, notably cast-iron pipe, is responsible for considerable work.

Orders for war materials have been the chief matter of interest in the iron and steel market, and while the tonnage involved is not large, the amount of money which will be expended in machine shops for the manufacture of war materials is enormous.

The improvement in financial conditions has enabled municipalities and governments to put out long-time bonds, and on a more favorable basis than last year. The general financial situation has decidedly improved. A month ago there was plenty of money for temporary needs, but comparatively little for long-time financiering. There is still a plethora of loanable funds for day-to-day needs, and quite a little capital is seeking investments. The unique conditions of the United States in financing South American countries, as well as European countries which formerly had been able to secure their funds in London markets or at home, argues well for an expansion of foreign trade.

The iron trade has shown slightly more activity, the output of iron during February showing an increase of more than 10%, compared with January and a decrease of only 10% compared with February of last year. The unfilled orders of the United States Steel Corporation increased during February, and at the end of the month were larger than at the end of July, 1914—just previous to the breaking out of the war. The steel trade is running at about 60% of capacity, although in some departments, such as fabricated steel, the ratio of operations comes far below this proportion. Pig iron business was uniformly dull throughout the month, but some encouragement has been noticed within the last few days.

Railroads are not large buyers of steel products, but are more interested in the market than they have been for some time. Then, too, there has been a change of sentiment toward the railroads, and not as much hostility as formerly. Few car orders have been reported, chiefly because the railroads now have 300,000 idle cars on their lines, but it is lamentable that the railroads have allowed their equipment and motive power to deteriorate in the way it has. Should there be a return to anything like normal traffic conditions, the motive power and rolling stock of most of the lines at least will be entirely inadequate to meet the demand. A few of the trunk lines are making improvements suspended some time ago, but most of them are attempting to improve the maintenance which has necessarily been allowed to slacken.

Metals show an improvement both in demand and price. Copper is squarely at 15c., with a very good foreign demand and slightly better domestic inquiries, although these latter are not large. Lead is higher and spelter is exceedingly scarce. The sharp fluctuations in the tin market are caused by a shortage of the supply in the United States, but this will be remedied.

Shipbuilding contracts have been fairly large, a number of boats being planned both on the Atlantic Seaboard and the Great Lakes. Some plants which have been idle for a number of years have been rehabilitated.

The phenomenal returns of foreign trade are highly gratifying. In February alone, the United States exported $170,000,000 more worth of goods and supplies than was imported. Moreover, there will be less money spent by American tourists in Europe this year than ever before since the Civil War.

Preparations for phenomenal wheat crops are being made, and it is evident that even with a bumper crop, prices will be unusually high.

The announcement that one of the shrewd men of the cement trade, E. M. Hager, intends to establish a chain of cement mills across the country, particularly in the undeveloped country, is simply an indication that competent judges believe business is going to be considerably more active.

Activity in the Pittsburgh district is evident. Following the announcement that the Allegheny County Commissioners would at once begin construction work involving the outlay of $5,000,000, the City Council of Pittsburgh agreed with the Baltimore & Ohio R.R. and the Pittsburgh Rys. Co. to begin work on the elimination of the 33d St. grade crossing at Liberty Ave. The estimated cost is $500,000. Besides this the city will start the work of raising all the streets between Eighth St. and the Monongahela and between the Allegheny River front and Liberty Ave. The municipal improvement will be started by Apr. 1, as most of the damage waivers given by property owners will expire on that date and the city is desirous of keeping out of any unnecessary litigation. It entails not only the raising of several miles of thoroughfares in the very heart of the downtown section of Pittsburgh but makes necessary the razing, rebuilding or extensive alterations of all the factories, mills, stores, lofts, hotels, dwellings and, in fact, every structure in the district. With this job, the grade crossing elimination, the construction of the new tunnel through Mt. Washington, the new City-County Bldg., the William Penn Hotel and the Schenley High School all under construction at the same time, the money spent will amount to considerably more than ten millions. The coming summer promises to be the best since the summer of 1912 when there was a labor famine in the Pittsburgh district.

Highway building will be more active than ever, a report on a previous page shows that the various states will spend for state aid highways about $60,000,000. At this the appropriations for some large states—notably Pennsylvania—have not been received.

Will There Be a Scarcity of Labor?

The repeal of the objectionable features of the Alien Labor Clause by the New York Legislature has permitted construction work on the New York subways to go forward. Preference is given to native labor, but unfortunately very few of the men who will work for the wages of the alien are physically able to perform the work. There does not seem to be the great surplus of rough labor which one would naturally expect with so many mechanics out of work. This is accounted for by the returns of the Department of Commerce and Labor, which show that the steerage passengers going east across the Atlantic outnumber those coming into the United States.

Immmigration statistics for the past several months have shown a steady falling off in the number of aliens arriving at these shores, and although there is no pressing need for laborers, some are seriously questioning whether there will be a sufficient number to care for the work when prosperity returns.

Since the first canals were built, practically the earliest important construction work in the United States, the heavy manual labor has been done by recently arrived immigrants. Most of these came from Europe, but Africa contributed her share, sending early plantation laborers to the South, and in the early '50's there was a migration of Orientals. The discovery of gold in California drew adventurers from all parts of the world, and the high record of 427,000 aliens admitted in one year was established in 1854. During the Civil War, immigration was materially reduced, and fell to 72,000 in 1862. The record of '54 was unequaled until 1873, when 459,000 aliens were admitted, and a new high record was again set up in 1881, when 669,000 came to these shores; but this was exceeded in the following year. This record stood until 1903, since when the records have been repeatedly broken, although that established in 1907, when 1,285,000 aliens were admitted, still stands. In the seven months ending with January, 1915, only 296,000 arrived, compared with 883,000 in the corresponding period last year. Further than that, departures in the first seven months of third-class and steerage passengers actually exceeded the arrivals, so there has been a distinct loss on immigration.

There are several reasons to account for this, namely, the war in Europe and the impossibility of some countries sending any immigrants, such as Russia, which in the six months ending Jan. 1, 1914, sent us 175,000, compared with 25,000 in the corresponding period in 1915. Emigration from Austria and Hungary both was cut off by the lack of transportation, and the fall in Italian migration to this country from 173,000 in the last six months of 1913, to 27,000 in the last six months of 1914, is more readily traceable to economic conditions in this country than from the lack of transportation facilities.

When the war is over, as it will be some day, there will be a vast amount of new construction necessary in Europe, but it is scarcely probable that Italian laborers will be called to repair damage in northern France, Belgium or Poland. Such reconstruction will necessarily be slow. The high wages offered by America in times past cannot be paid by those countries, but in other European countries, where the ravages of war have not taken place, if there be such, there will be no great amount of work to be done. As most of the efficient labor for construction work has come from Italy, there is little doubt that that country will continue to send us laborers when we need them. From the Scandinavian peninsula will be drawn farmers, and from Hungary and Austria other forms of labor which have been so useful in the past. While there may be a temporary shortage, this is not likely to continue for any length of time.

CEMENT, LIME AND BRICK

Sales agents in the New York market are not at all optimistic over the outlook. So much cement has been sold for forward delivery at low prices that it will take a vast amount of construction work to bring quotations to anything like normal. The low quotation at $1.23 New York, equivalent to about 60c. per bbl. in bulk at the mill, continues, and, although many dealers have filled their available storage places, it has not had the effect on the storehouses and the mills that was expected. Numerous salesmen from a mill which has been one of the important factors in cutting quotations for a number of years, are seeking positions, and this leads to the belief that this price cutter has been eliminated for the time being. The announcement that E. M. Hagar, former President of the Universal Portland Cement Co., is forming a company to build a chain of cement mills across the country, is a reflection of the optimism in the West. It is known that the cement mills there have had much more business than the eastern mills, and the excellent outlook for concrete highway construction this year promises well for the maintenance of quotations in that field. Cement prices, less the charge of 40c. made for bags, are as follows:

Chicago	$1.11	Boston	$1.46
Detroit	1.19	Cleveland	1.16
Jersey City	0.74	Duluth	1.32
New York	0.82	Minneapolis	1.30
St. Paul	1.30	Pittsburgh	1.00

Brick—Prices are steady and there seems to be a better demand. It is probable that business will show an improvement compared with last year, but this has not been reflected in the price. It would seem unlikely that any considerable advance could take place in the near future, but many men believe the present year will witness the greatest building boom since 1906. Hudson River common brick sell at $5.50@6, New York.

Gravel—An improvement in the demand is evident and prices are firm. Ordinary gravel sells at 85c., but subway gravel is held at $1.15. These prices are for barge loads of 500 cu.yd. delivered alongside of dock, New York.

Lime—It is evident that business is better. For what business is doing prices remain unchanged at 97c. per bbl. for state common, 200 lb. net; $1.37 for 30 lb. barrel; $1.55 for 300 lb. finishing; $1.10 for 200 lb. finishing; and $1.72 for 350 lb.

Crushed Stone—Prices are steady at 80@85c. for 1½-in. stone and 90@95c. for ¾-in. stone.

IRON AND STEEL

Pig Iron—The extremely quiet condition of pig iron which has prevailed ever since November continued until the latter part of the month when Buffalo furnaces reduced prices and obtained orders amounting to about 175,000 tons, making concession in prices of about 50c. a ton. Advices from that point indicates a large business in No. 2X foundry at $12, while No. 2 was quoted at $11.75. The principal buyers were foundries in New York, New England and New Jersey, and in some cases sales went into the second half of the year. It was expected that producers in the Central West and Chicago would follow the example of Buffalo when, late in the month, Buffalo interests reëstablished the old prices. This arrangement however, is understood to be temporary. Virginia furnaces are reported to have sold a number of small lots of foundry for Eastern and New England delivery for shipment over the last half of the year. Nearly all of the Tennessee iron sold of late was in warrant yards, and sales were made as low as $9 for No. 2 Foundry, in Birmingham. A hopeful tone is voiced by the leading producers and large business is confidently predicted.

Prices are slightly lower and for lots of 100 tons or over at the points named are as follows: Cincinnati, Southern Foundry No. 2, $12.25@12.75; Northern Foundry, No. 2, $14@14.50; Northern Foundry No. 3, $13,75@14. In New York quotations are as follows: No. 2X Northern Foundry, $14@14.25; No. 2 plain Northern Foundry, $13.75@14. No. 2 Southern Foundry, delivered, $14@14.25. In Birmingham Southern Foundry No. 2 is $9.25@9.75. In Chicago, Northern Foundry is $13@13.25. In Pittsburgh bessemer iron is $14.55 and basic $13.45, including the 95c. freight rate from the valley to the Pittsburgh district.

Steel Rails—Few orders of any moment have been booked for standard rails. The chief interest in the steel market is in the placing of the Pennsylvania orders. The railroads do not seem to be in any hurry about placing their orders, and evidently are trying to bargain for better cropping. Some considerable business has been transacted in light rails, and a few export orders have been placed. It is rumored that some business will be booked for Argentine as a result of the credit established by New York bankers. Prices are of course unchanged. The standard prices for lots of 1000 tons are as follows: Standard sections of bessemer, $28; openhearth, $30, both f.o.b. Pittsburgh, per net ton. Girder rails, 30-ft. length, are $36.40 per gross ton, and 60-ft. length $38.40 per gross ton, both f.o.b. New York. Other quotations f.o.b. Pittsburgh for large lots, the price being given in cents per pound, are as follows: Standard sections 1.25c., 25 to 35 lb. 1.15c., 15 to 20 lb. 1.20c., 12 to 13 lb., 1.25c., 8 to 12 lb. 1.30c. Relaying rails from New York are quoted at a slightly higher figure of $19.50.

Structural Shapes—The fabricating shops of the country are operating about 35% of capacity, whereas the steel trade is working for nearly 70% of capacity. Bridge work is coming out very slowly, and large buildings are scarcely being figured. There are a few roof trusses, but these do not run into tonnage. One of the peculiarities in trade is that it is possible to secure shapes with a few punching, or slightly fabricated, in the New York market at a cheaper price than plain material can be had. For shipbuilding work there is a fair demand but other than this the construction which has developed so far this year is for work where there will be little structural steel used. Quotations are as follows: I-beams, 3 to 15 in.; channels, 3 to 15 in.; angles, 3 to 6 in.; tees, 2- to 3-in. and over, $1.15. Other quotations, including I's over 18 in., H-beams 18 in., channels over 15 in., angles over 4 in., $1.30. Tees, $1.25. Deck beams and bulb angles, $1.50; handrail tees, $1.95. Cutting to specified length is charged at the following rate: Cutting 3 ft. to 2 ft. inclusive, 25c. per 100 lb.; 2 ft. to 1 ft. inclusive, 50c. per 100 lb.; less than 1 ft., $1.55. No charge is made for cutting to lenghs over 3 ft. In Chicago the base price is $1.34, in New York $1.26 to $1.31, in Philadelphia $1.25 to $1.30, and San Francisco $2 to $2.05.

Plates—Continued activity at the shipbuilding plants, together with the knowledge that there will be a great deal more work in this line within the next few months, gives much promise to the market. The price is supposed to be $1.20, Pittsburgh, and in fact $1 a ton higher all around than last month, which would mean $1.35 to $1.40, Philadelphia; $1.36 to $1.41, New York, and $1.35 to $1.39, Chicago, but this price is not closely adhered to, and there seems to be considerable cutting of quotations. Japan is figuring on 15,000 tons additional, following the order for 22,000 tons early in the month. Car-building work is very light, but there have been a few orders from Western roads for tank cars, and it is evident that the motor-car business will increase. The ability of railroads to finance many improvements should be most helpful to the plate market in the near future. Shipbuilders have taken at least 75,000 tons in the last few weeks, and more orders of like character are being figured. In the Pittsburgh district the plate mills are operating to about 70% of capacity.

Cast-Iron Pipe—Business continues fair. Developments are more noticeable in the Mississippi Valley and the Central West, than a month ago, and are relatively less in the East. There are a number of fair sized inquiries in the market, and the 13,000-ton order for Cleveland is peculiar from the fact that it involves some large sized pipe—36-, 42- and 48-in. Prices are slightly higher in Birmingham, but easier in Chicago. The following quotations are given per net ton: Birmingham, 4 in., $20, 6 in., $18; Chicago, 4 in., $25.50, 6 and 12 in., $23.50, 16 in. and upwards, $23; in New York, 6 in. and larger, $20. Gas pipe is $1 a ton higher in all markets.

Pipe—The market is steadier than a month ago and operations are larger, the ratio being about 70% of capacity. Quite a few orders of importance are in sight. It is evident that the fear about not having sufficient spelter to galvanize pipe was warranted, but the mills are holding back shipments on this class of material as much as possible. Prices on black pipe are low, considering the cost of materials, and the same applies to galvanized pipe, but, of course, these are high by comparison. Discounts are unchanged, and for large orders, amounting to carload or more, are as follows:

	Black	Galvanized
¾- to 2-in. steel, butt welded	80%	69½%
2½- to 6-in. steel, lap welded	79%	68½%
7- to 12-in. steel, lap welded	77%	66½%

At these discounts, the net prices of pipe per foot, in large lots, at Pittsburgh are as follows:

Diameter	Cents Black	Cents Galvanized	Diameter	Cents Black	Cents Galvanized
¾-in.	2.20	3.50	5-in.	31.00	47.00
1-in.	3.40	5.20	6-in.	40.40	61.00
1¼-in.	4.60	7.00	7-in.	55.00	80.00
1½-in.	5.50	8.40	8-in.	57.50	84.00
2-in.	7.40	11.15	9-in.	79.50	$1.16
2½-in.	12.20	18.60	10-in.	95.00	$1.38
3-in	16.10	24.20	11-in.	$1.06	$1.55
4-in.	22.90	34.50	12-in.	$1.17	$1.70

Sheets—The mills are operating to about 65% of capacity, and while galvanized sheets are not so scarce and it is easier to get supplies, deliveries are by no means as backward as they were. Another factor has appeared in the galvanized market, and that is that jobbers and other large consumers who have contracted for a fairly large amount, seeming to have a surplus, are selling at some times at less than the market quotation. This, of course, is having effect on mill quotations, and leads to considerable talk about unevenness in price. The demand is fair, but not as large as a few weeks ago, when the trade was thoroughly scared, and it was feared that consumers would be unable to secure galvanized sheets.

The following quotations are for large lots of sheets in Pittsburgh, and small lots from store, New York.

	Cents per Pound—Large lots Pittsburgh		Warehouse delivery New York	
	Black	Galv.	Black	Galv
No. 10	1.55	2.40	....	....
No. 12	1.55	2.50	....	....
No. 14	1.60	2.50	....	....
No. 16	1.65	2.60	2.35	3.25
Nos. 18 and 20	1.70	2.80	2.40	3.40
Nos. 22 and 24	1.75	2.90	2.45	3.55
No. 26	1.80	3.05	2.50	3.70
No. 27	1.85	3.25	2.55	3.85
No. 28	1.90	3.40	2.60	4.00

Steel Shapes—Prices are not as steady as they might be, although the following quotations are supposed to represent the New York market. It is cheaper to buy shapes with a few holes punched in them, as fabricated material, rather than pay the full store price for plain material. In Jobbers' Warehouse, New York, prices are as follows:

	Cents Per Pound
Refined iron:	
1 to 1⅞ in., round and square	1.85
1½ to 4 in. x ⅜ to 1 in	1.85
1½ to 4 in. x ¼ to $\frac{5}{16}$ in	2.05
Norway bars	3.20
Burdens bar iron	3.15
Soft steel:	
¾ to 3 in., round and square	1.85
1 to 6 in. x ⅜ to 1 in	1.85
1 to 6 in. x ¼ and $\frac{5}{16}$ in	2.00
Rods—⅝ and 1¼ in	1.95
Bands—1½ to 6x$\frac{3}{16}$ in. to No. 8	2.15
Beams and channels—3 to 15 in	1.90
Angles:	
3 in. x ¼ in. and larger	1.90
3 in. x $\frac{5}{16}$ in. and ⅛ in	2.35
1½ to 2¾ in. x $\frac{5}{16}$ in. and thicker	2.00
1½ to 2½ in. x ⅛ in	2.10
1 to 1¼ in. x $\frac{5}{16}$ in	2.10
1 to 1¼ in. x ⅛ in	2.15
Tees:	
1½ to 2½x¼ in	2.05
1½ to 2½x$\frac{5}{16}$ in	2.15
3 in. and larger	1.95

Old Materials—The market is very uneven. Advances are the rule in Pittsburgh, in New York there are more advances than declines, but in Chicago the market is undeniably down from last month. A fair demand for cast scrap is noted, but the rolling mills are doing little or no business. The low prices in Chicago are probably due to the oversupply of material, mostly coming from the railroads. This has been unusually large for two or three weeks, and there has been an especially large tonnage of car wheels turned in, which reduced the prices on that market below what they normally would be. In Pittsburgh, dealers are reluctant to sell, preferring to hold stock on hand for higher prices, and those who have stock will not dispose of it at these low figures. Therefore the market is relatively better. Prices in New York per gross ton are as follows:

	Per Gross Ton
Heavy-melting steel scrap	$8.75 to $9.00
Pipes and flues	8.00 to 8.25
No. 1 railroad wrought	10.50 to 11.00
Stove plate	7.75 to 8.00
No. 1 machinery cast	10.50 to 11.00
Wrought turnings	6.25 to 6.50

The Chicago market is, as stated, slightly lower. Quotations are as follows:

	Per Gross Ton
Heavy-melting steel scrap	$9.25 to $9.75
	Per Net Ton
No. 1 railroad wrought	$9.00 to $9.25
No. 2 railroad wrought	8.50 to 8.75
No. 1 cast scrap	9.00 to 9.25
Pipes and flues	6.75 to 7.25
Agricultural malleable	7.25 to 7.50
Railroad malleable	8.00 to 8.50

The higher prices in the Pittsburgh market are reflected in the following quotations:

	Per Gross Ton
Heavy-melting steel scrap	$12.00 to $12.25
Re-rolling rails	11.75 to 12.00
No. 1 foundry cast	12.00 to 12.25
Old car wheels	10.75 to 11.00
Machine shop turnings	8.00 to 8.25
Railroad malleable	10.00 to 10.25

Freight Rates—The freight rates on finished steel products from the Pittsburgh district, including plates, structural shapes, merchant steel, bars, pipe fittings, plain and galvanized, wire nails, rivets, spikes, bolts, black sheets (except planished), chain, etc., are as follows, in cents per 100 lb.: Boston, 18.9c.; Buffalo, 11.6c.; Baltimore, 15.4c.; Cleveland, 10.5c.; Cincinnati, 15.8c.; Chicago, 18.9c.; Denver, Colo., 68.6c.; New Orleans, 30c.; New York, 16.9c.; Philadelphia, 15.9c.; St. Louis, 23.6c.; Minnesota and St. Paul, 32.9c.; Pacific Coast (all rail), 80c.

Steel Sheet Piling—Prices are without change at 1.55@1.60c. per lb. f.o.b. Pittsburgh.

Wire Rope—A fair inquiry leads to the belief that better business may be expected. Discounts are unchanged at 47 and 5% from list for galvanized, and 55 and 5% for bright. At these discounts the net price of wire rope at the mill is as follows:

Diameter in Inches	Price per Foot—Cast Steel	Crucible Steel	Plow Steel
2½	$0.75	$0.90	$1.07
2¼	0.61	0.73	0.86
2	0.47	0.57	0.67
1¾	0.39	0.49	0.58
1½	0.28	0.34	0.40
1¼	0.20	0.24	0.27
1	0.13	0.15	0.18
¾	0.08	0.09	0.11
⅝	0.06	0.07	0.08

Wire—A continued heavy demand from abroad is keeping the mills active and specifications against contracts placed at much lower prices by domestic consumers are liberal. Prices are slightly higher, and per 100 lb. f.o.b. Pittsburgh are as follows: Plain wire to retailers, $1.50; galvanized wire to retailers, $2; painted barbed wire, $1.70; galvanized barbed wire, $2.20. Wire nails are $1.75 and galvanized wire nails $3.30.

Coke—In spite of a larger demand, an increased output and a better feeling in the trade, the price is lower than a month ago. Prompt shipments can be had at $1.50@1.55 delivery up to July 1 at $1.65 and contracts for the second half $1.75. Foundry coke is very quiet, selling at $2@2.15 for prompt and $2.25@2.40 for contracts.

CLAY PRODUCTS

Sewer Pipe—No marked change has been shown in the market, although there have been indications of a general improvement. Discounts remain unchanged as follows: 3 to 24 in., 78%; 27 to 30 in., 70%; 33 to 36 in., 65%. At these discounts, net prices are as follows:

PRICE OF SEWER PIPE PER FOOT

Size		Size	
3-in	$0.055	18-in.	$0.418
4-in.	0.055	20-in.	0.495
5-in.	0.088	22-in.	0.66
6-in.	0 088	24-in.	0.715
8-in.	0 1265	27-in.	1.35
10-in.	0 184	30-in.	1.65
12-in.	0 22	33-in.	2.20
15-in.	0.297	36-in.	2.45
18-in.	0.418		

Flue Lining—Conditions are about the same as they were a month ago, discounts being 80 per cent. from list. At this rate, prices are as follows:

FLUE LINING PRICE PER FOOT

Size	Weight in Lb.	Price per Ft.	Size	Weight in Lb.	Price per Ft.
4½x8½-in	14	$0.07	8½x18-in	45	$0.18
4½x13-in	20	0.09	13x13-in	45	0.17
7½x7½-in	15	0.08	13x18-in	57	0.24
8½x8½-in	18	0.09	18x18-in	75	0.40
8½x13-in	28	0.13			

REINFORCING MATERIALS

Bars, Concrete Reinforcing—Inquiries are far more numerous and there is a prospect that much work will come out. The advance of $1 per ton announced, some time ago, for Apr. 1 went into effect raising the quotation to 1.20c., Pittsburgh. Other prices are as follows:

Size	Cents per Pound—Mill Shipments Pittsburgh	*Warehouse Pittsburgh	Delivered from *Warehouse New York
¾-in and larger	1.15	1.50	1.95 to 2.00
⅝-in.	1.20	1.65	2.00 to 2.05
½-in.	1.35	1.80	2.15 to 2.20
⅜-in.	1.45	1.90	2.25 to 2.30
¼-in.	1.75	2.20	2.60 to 2.65

*Bars from warehouse are cut to desired length without extra charge.

Triangle Mesh—Prices continue steady and there is a fair inquiry:

PRICE PER 100 SQ.FT.

Style No.	Cross Sec. Area per Ft. Width	Plain Material—Carload Lots	Plain Material—Less Than Car Lots and Over 10,000 Sq.Ft.	Galvanized—Carload Lots	Galvanized—Less Than Car Lots and Over 10,000 Sq.Ft.
†4	0.102	$1.00	$1.23	$1.12	$1.38
5	0.077	0.80	0.97	0.89	1.00
6	0.058	0.63	0.77	0.71	0.84
†7	0.041	0.49	0.60	0.55	0.66
†23	0.170	1.69	2.05	1.88	2.24
24	0.142	1.46	1.77	1.62	1.93
25	0.124	1.29	1.57	1.43	1.71
†26	0.110	1.17	1.42	1.30	1.55
†27	0.085	0.96	1.17	1.07	1.28
28	0.066	0.80	0.97	0.89	1.06
29	0.049	0.66	0.80	0.73	0.87
31	0.261	2.49	3.02	2.76	3.29
32	0.225	2.16	2.62	2.40	2.86
33	0.196	1.93	2.34	2.14	2.55
34	0.146	1.48	1.80	1.64	1.96
35	0.109	1.117	1.42	1.30	1.55
36	0.075	0.87	1.05	0.97	1.15
38	0.380	3.55	4.30	3.93	4.68
†39	0.325	3.05	3.70	3.38	4.03
40	0.283	2.68	3.25	2.97	3.54
41	0.208	2.05	2.48	2.27	2.70
42	0.151	1.55	1.88	1.72	2.05
†43	0.101	1.10	1.34	1.23	1.46

†This material is made in regular widths of 18, 22, 26, 30, 34, 42, 46, 50, 54 and 58 in. Standard lengths in rolls are 150, 250, 300 and 600 ft.

Copper—Lack of competition among the large producing interests resulted in higher prices for electrolytic. Another cause for the higher prices was the action of the British Government in taking over all copper which it has prevented from going to Germany. The producing interests are asking 15¾c. delivered thirty days, while there are few buyers at 15½c. Business from abroad has fallen off and the domestic orders for manufactured material continue small. For the first 27 days of March exports from New York amounted to 25,100 tons and imports at Atlantic ports only aggregated 5810 tons.

Tin—A marked advance in the price of tin during the past month has been brought about mainly by the limited amount of imports. The net gain after a sensational rise is about 10c. and the present price being around 47½c. for spot for five ton lots. Imports during March amount to 780 tons and cargoes afloat amount to 2945 tons. The market has been anything but steady, the price having gone as high as 55c. The prospects now appear to indicate a more liberal supply for the United States and consumers are inclined to buy in small quantities, expecting a reaction from prevailing high prices.

Lead—The price for lead has advanced steadily and a firm tone to the market has been evident from the steadiness manifested. Spot was held at 4.15c. New York and 4.10c. East St. Louis with a fair demand.

Spelter—The market for a month past has been unsettled prices advancing as high as 11½c. for spot. Reaction ensued and some sales of 50,000 lb. lots were reported as low as 8½c. for April delivery. Single car loads of spot are quoted at 9¼c. New York and 9⅛c. East St. Louis.

Old Metals—Selling prices of old metals are as follows:

	Cents per Lb.
Copper, heavy and crucible	14.00 to 14.25
Copper, heavy and wire	13.65 to 14.00
Copper, light and bottoms	12.50 to 12.80
Heavy machine composition	11.50 to 11.80
Brass, heavy	9.50 to 9.75
Brass, light	7.65 to 8.00
Clean brass turnings	9.40 to 9.70
Composition turnings	9.75 to 10.25
Lead, heavy	3.80
Lead, tea	3.50
Zinc, scrap	6.50

Miscellaneous Metals—The prices of various metals from jobbers' warehouse, New York, are as follows:

	Per Pound
Brass tubes, iron-pipe sizes:	
½ in.	19.00c.
¾ in. to 3 in.	18.00c.
3½ in.	18.00c.
4 in.	19.00c.
Brass rods	17.00c.
Brass sheets	17.25c.
Solder	35.00c.
Copper tubes	21.50c.
Zinc sheets	14.00 to 14.50c.
Copper sheets	19.75c.
Pig tin (five-ton lots, cash)	60.00c.
Bismuth	$3.75 to $4.00

MISCELLANEOUS

Railway Ties—No change has occurred during the month and shipping conditions remain about the same. First-class standard ties are quoted as follows: 7x9-in. by 8 ft. 6 in., 72c.; 6x8 in. by 8 ft., 63c. These prices are f.o.b. New York.

Rubber—Prices are somewhat easier while the demand is large. The rubber markets have presented many curious phases during the last few years, but none of them more uncertain than for the past few months. Up River Para fine is quoted at 58c., while up-river Para coarse to 47c. Island fine 53 to 54c., Ceylon sheet is 54c. and Ceylon crepe is 65c. Old rubber shows little change. Automobile tires sell at 4¾c., bicycle tires at 3c., airbrake hoses, 2½ to 3c., and inner tubes, 12 to 14c.

RAILWAYS

New York—According to press reports plans are being made by the MacIntyre Iron Co., Sanford, for the construction of a railway from Sanford Lake to Tahawus, N. Y.

Virginia—New York, Philadelphia & Norfolk R.R.—This company is preparing plans for extensive improvements to its system. M. W. Clement, Cape Charles City, Va., is Div. Engr.

Virginia—Radford-Willis Southern Ry.—T. W. Simpson, Engr., is making surveys for the construction of a railway from Radford to Willis, Va., about 25 miles. John L. Vaughan, Shawsville, Va., is Pres. Noted Feb. 25.

West Virginia—Virginian Ry.—Bids will soon be received by this company for the construction of a railway from Stone Coal, W. Va., to Stone Coal Creek, about six miles. H. Fernstrom, Norfolk, Va., is Ch. Engr.

West Virginia—West Fork R.R.—This company is being organized to construct a railway from Fairmont, W. Va., to Monongah and Grafton, W. Va., about 18 miles. Scott C. Lowe, J. A. Jamison and M. A. Fletcher are interested.

North Carolina—Avery Northwestern Ry.—Preliminary work will soon be started by this company on the construction of its proposed railway from Edgemont to Newland, N. C. P. M. Brown, Newland, is Pres. and W. W. Barber, Edgemont, is Mgr. Noted Mar. 18.

North Carolina—Carolina & Northwestern Ry.—According to press reports this company contemplates the improvement and extension of its lines from Newton, N. C. J. W. Fletcher, Jr., Chester, S. C., is Roadway Supt.

North Carolina—Graham County R.R.—E. Philbrick, Cornelia,, Ga., has been retained as consulting engineer for the construction of the proposed railway from Andrews to Robbinsville, N. C.

Georgia—Ocilla Southern R.R.—This company is making surveys for the extension of its line to Macon, Ga. The company now operates a line from Nashville to Rochelle and is constructing a line from Rochelle to Pope City. D. C. Smith, Ocilla, is Gen. Mgr. Noted Dec. 24 and Mar. 11.

Georgia—Ocmulgee Valley Ry.—Preliminary arrangements are being made and work will soon be started by this company on the construction of the proposed railway from Jacksonville, Ga., to Lumber City, Ga., about 20 miles. J. C. Work, Lumber City, is Ch. Engr. Noted Mar. 4.

Alabama—The construction of a 15-mile railway from Tuscaloosa, Ala., to the timber lands, is contemplated by Fox Henderson, Troy, Ala., and associates.

✝Alabama—The Tidewater Securities Corporation has awarded a contract to J. N. GILLIS & SON, Brewton, Ala., for the construction of a railway from Alabama Port to Cedar Point, Ala.

Wisconsin—Minneapolis, St. Paul & Sault Ste. Marie Ry.—The construction of an extension from Dresser Junction to New Richmond, Wis., is contemplated by this company. C. N. Kalk, Minneapolis, Minn., is Ch. Engr.

Wyoming—Beaver Hills Coal Co.—Plans are being considered by this company for the construction of a 10-mile railway from Sheridan, Wyo., to its mines.

Montana—Keating Gold Mining Co.—According to press reports this company will construct a railway from Toston to Radersburg, Mont., about 14 miles.

Texas—J. Shelby, El Paso, Tex., is reported interested in the construction of a 28-mile railway from Sierra Blanca, Tex., to the coal fields.

ELECTRIC RAILWAYS

New Britain, Conn.—The Hartford, New Britain & Meriden Ry. Co. has applied to the Council for a franchise to extend its lines by another route to New Britain.

New Britain, Conn.—The New Britain, Kensington & Meriden Ry. Co. is making arrangements to complete the construction of its electric railway from Meriden to New Britain. E. A. Moore, New Britain, is Pres.

Buffalo, N. Y.—The International Ry. Co. contemplates the extension of its line on South Park Ave. to the south city line. J. C. Sheldon, Buffalo, is Pur. Agt.

Mt. Vernon, N. Y.—The Council has granted a franchise to the Westchester Electric Ry. Co. for the extension of its North Pelham-Mt. Vernon line from the North Pelham village line to Union Corners, East Chester. William B. Wheeler, 519 South Fifth Ave., Mt. Vernon, is Supt.

Watertown, N. Y.—Plans are being prepared by the Black River Traction Co. for an expenditure of $15,000 for the improvement of its lines in Watertown. L. Schwerzmann, Watertown, is Gen. Mgr. and Pur. Agt.

Jersey City, N. J.—The State Senate, Mar. 23, passed the bill providing for the construction of a belt railway by the city to connect the railroad trunk lines.

Trenton, N. J.—Plans are being prepared by the Trenton & Mercer County Traction Co. for the extension of its North Olden Ave. division from East State St. to North Clinton Ave. William H. Hitchcock, Trenton, is Gen. Mgr.

Pittsburgh, Penn.—The Pittsburgh Rys. Co. contemplates double-tracking its Beechview line to Mt. Lebanon. P. N. Jones, Pittsburgh, is Gen. Mgr.

Miami, Fla.—The Miami Traction Co. is considering plans for the construction of an electric railway on the Southside in Miami. B. B. Tatum, Miami, is Pres.

Louisville, Ky.—The Louisville Ry. Co. has purchased a franchise to construct a double-track electric railway from the terminus of its Chestnut St. line to Shawnee Park, about two miles. W. H. McClure, Louisville, is Pur. Agt.

Ludlow, Ky.—The South Covington & Cincinnati St. Ry. Co. has been granted a franchise for the construction of an electric railway in Ludlow.

Cleveland, Ohio—The City Council has granted a franchise to the Cleveland Short Line for an extension of its railway in Cleveland.

Jefferson, Ohio—The Chardon, Jefferson & Meadville Interurban Ry. Co. is making preliminary arrangements for the constuction of its proposed electric railway to connect Chardon, Hampton, Rock Creek and Jefferson, about 30 miles. Noted Feb. 26, 1914.

Angola, Ind.—The St. Joseph Valley Ry. Co. has applied for a charter to construct an electric railway from Angola, Ind., to Toledo, Ohio.

Benton, Ill.—The Southern Illinois & St. Louis Ry. Co. is making preliminary arrangements for the construction of an electric railway to connect Benton, West Frankfort, Warren, Marion and Johnston City. W. H. Schott is Pres.

Danville, Ill.—The residents of Oaklawn, a suburb of Danville, have petitioned the Danville St. Ry. & Light Co. to extend its line from Junction Ave. to Illinois St. H. J. Vance, Peoria, is Pur. Agt.

Joliet, Ill.—Plans are being considered by the Chicago & Joliet Electric Ry. Co. for the extension of its line to Theilers Park. J. R. Blackhall, Joliet, is Gen. Mgr.

Kansas City, Mo.—The Metropolitan St. Ry. Co. is making arrangements to start work on the reconstruction of its tracks on Walnut St. A. E. Harvey, Kansas City, is Ch. Engr.

Sedalia, Mo.—Plans are being prepared by the City Light & Traction Co. for the extension and improvement of its lines in Sedalia. Henry D. Frueauff, Sedalia, is Gen. Mgr.

Houston, Tex.—The Beaumont, Liberty & Houston Traction Co. plans to start work soon on the construction of its proposed electric railway from Houston to Richmond. Edward Kennedy is Pres. Noted Mar. 25.

San Antonio, Tex.—The San Antonio-Austin Interurban Ry. Co. has revived its plans for constructing an interurban electric railway from San Antonio to Austin, about 85 miles. The work of surveying the route and securing the right-of-way for the proposed road will be resumed soon, it is stated. Noted Aug. 21, 1913, and Aug. 13, 1914.

Sutherlin, Ore.—Plans for the construction of an electric railway to connect Sutherlin, and Umpqua, about 14 miles, are under consideration.

Brantford, Ont.—The City Council has approved plans of the Brantford Municipal Ry. Co. for the extension of its lines to form a loop at Eagle Pl. Noted Nov. 5.

Lethbridge, Alta.—The City Council is considering the extension of the Lethbridge Municipal Ry. to Hardieville. L. E. Goellincht, Lethbridge, is Ch. Engr.

New Westminster, B. C.—Preliminary arrangements are being made by the British Columbia Electric Ry. Co. to start work on the construction of an electric railway on Front St. E. Sterling, New Westminster, is Supt.

LIGHT, HEAT AND POWER

✝Waterbury, Conn.—The Board of Education has awarded the contract for heating, ventilating and mechanical equipment for the Clark School to the M. J. DALY & SONS CO., 553 Bank St., Waterbury, at $18,996. The contract for the plumbing was awarded to the BARLOW BROS. CO., 63 Grand St., at $4490. Noted Mar. 11.

New York, N. Y.—(Borough of Manhattan)—(Official)—Bids will be received until 11 a.m., Apr. 5, by C. B. J. Snyder, Supt. of School Bldgs., Park Ave. and 59th St., Borough of Manhattan, for heating and ventilating apparatus and temperature regulation in new Public School 55, St. Paul's Pl., between Park and Washington Ave., Borough of Bronx.

New York, N. Y.—(Borough of Manhattan)—(Official)—Bids will be received until noon, Apr. 2, by the Board of Trustees, Bellevue and Allied Hospitals, 415 East 26th St., for all lighting fixtures in Pavilions "I" and "K" of the new Bellevue Hospital. John W. Brannan, M.D., is Pres. Bd. of Trustees.

Clinton, N. J.—Bids will be received until 2 p.m., Apr. 9, by the Board of Managers of the State Reformatory for Women for the construction of an electric transmission line. Plans on file with the Commissioner of Charities, State House, Trenton.

Hoboken, N. J.—It is reported that the City Council contemplates the installation of a municipal electric-light plant to cost about $50,000. James H. Londrigan is City Clk.

Paterson, N. J.—David G. Smith, Comr. of the Bd. of Education, has recommended the installation of an electric-light and power plant in the High School having the capacity to furnish electrical service to the High School, School No. 23, the Court House and the Federal Building. The estimated cost is $4600.

Allentown, Penn.—It is reported that the Lehigh Valley Light & Power Co. will shortly extend its transmission lines to Schnecksville and Neffs, about 12 miles. A. H. S. Cantlin is Vice-Pres. and Mgr. of the company.

Philadelphia, Penn.—The Harrison Bros. Co., 3500 Grays Ferry Rd., Philadelphia, manufacturer of paints, white lead and chemicals, will build a one-story, 47x57-ft. power plant to cost about $15,000.

✝Baltimore, Md.—The Board of Awards has awarded the contract for the installation of a new turbine of 500-kw. capacity in the high-pressure pumping station on South St. to RICHARD MORTON, 820 Equitable Bldg. The new equipment is for the purpose of furnishing electric lights for the City Hall, the Court House and other municipal buildings. Noted Mar. 4.

Cary, N. C.—It is reported that the City Council has authorized the issue of not more than $20,000 in bonds for the purpose of installing a municipal electric-light plant.

Morganton, N. C.—According to press reports, plans have been completed for the construction of a dam and power house on the Catawba River to develop 6000 hp. and a plant on the Henry River to develop 4000 hp. The energy generated at these plants will be transmitted to Morganton, Drexel, Connellys Springs and Valdese. H. L. Millner is Engr.

✝Kentwood, La.—A contract has been awarded to the BROOKS-SCANLON CO. for lighting the town with electricity. Plans are being considered for the installation of a new plant.

Greenfield, Ind.—Bids will be received until Apr. 7 by the City Clerk for one engine or turbine and a directly connected 180-kw. alternating-current generator, exciter and switchboard for the municipal electric-light plant. E. C. Wolfe is Supt. of the plant.

Hartford, Mich.—It is reported that the Hartford Light & Power Co. has been organized to take over the plant and property of the Anderson Bros. The company contemplates installing a new generator and making other improvements this spring.

Lapeer, Mich.—The City Council will call an election to vote on the question of issuing $20,000 in bonds for the purpose of installing a municipal electric-light plant.

Watseka, Ill.—At the coming city election in April, the citizens will be asked to vote on the question of establishing a municipal electric-light plant.

Beloit, Wis.—The Beloit Water, Gas & Electric Co. has been authorized by the Wisconsin Commission to issue $100,000 in bonds, the proceeds of which will be used for extending and improving its system. R. G. Krumrey, Beloit, is Gen. Supt.

Green Bay, Wis.—It is reported that the Wisconsin Public Service Co. contemplates the construction of a hydro-electric plant at Johnson Falls above Green Bay during the coming year. The estimated cost is $300,000. C. A. Ewing, Green Bay, is Ch. Engr.

Waukesha, Wis.—It is reported that H. H. Hayford, Supt. of Water Wks., will ask the City Council for an appropriation of $15,000 for the purpose of installing an electric-light plant in connection with the water-works system.

Irwin, Iowa—It is reported that plans are almost completed for the construction of electric transmission lines in Irwin to cost about $6000. Bruce. Standeven & Boynton, 430 Bee Bldg., Omaha, Neb., is Engr.

Crookston, Minn.—The City Council is considering the establishment of a municipal electric-light plant. The 30-year franchise of the local company has expired, and the city may purchase the plant or renew the franchise for another 30 years.

Anthony, Kan.—The Anthony Ice & Salt Co. has applied for a franchise to install and operate an electric-light plant in Anthony. Alfred E. Dent is Mgr.

†Osawatomie, Kan.—The City Council has awarded contracts for additions to the municipal power plant as follows: Power House, pipe line and filter building, CONNOR CONSTRUCTION CO., Kansas City, Kan.; boilers, MERKLE-HINES MACHINERY CO.; pumps, HENRY R. WORTHINGTON; engine, HADLEY-HUDSON CO., for a McIntosh-Seymour engine; motors, WESTINGHOUSE ELECTRIC & MFG. CO. The pumps will be changed from steam- to motor-driven, and the oil engines will gradually be replaced by steam engines. Noted Mar. 4.

Pratt, Kan.—(Official)—Bids will be received until 1 p.m., Apr. 20, by M. P. Jones, City Clk., for the construction of an electric-light and power plant. The work includes building the power house, 160- and 240-hp. engines, two oil-burning boilers, condensers, alternators, regulator, 4-panel switchboard transformers, etc. E. T. Archer & Co., New England Bldg., Kansas City, Mo., is Engr.

Broken Bow, Neb.—An election will be held Apr. 9 to vote on the question of issuing $10,000 in bonds, the proceeds of which will be used for the installation of a municipal electric-light plant.

Ceresco, Neb.—A special election will be held Apr. 6 to vote on the question of issuing $5000 in bonds to be used for the installation of a municipal electric-light plant.

Dundee, Neb.—(Official)—A special election will be held Apr. 17 at which the citizens will vote on the question of issuing $35,000 in bonds to be used for installing a system of street lights. The King Rohrbough Co., 316 McCague Bldg., Omaha, is Engr.

Dubois, Wyo.—It is reported that the Lander Electric Light & Power Co., Lander, contemplates the installation of an electric generating station and distribution system in the town of Dubois. E. D. Edwards, Lander, is Secy. and Treas. of the Lander Electric Light & Power Co.

†Deepwater, Mo.—The city has awarded the contract for the construction of an electric-light plant to the INDUSTRIAL IRON WORKS, Clinton, Mo., at $7092, and to the BESSEMER GAS ENGINE CO., Grove City, Penn., at $2430, for furnishing a 50-hp. oil engine. J. P. Davis, Windsor, Mo., is Consult. Engr. Bids were received Mar. 6. Noted Mar. 4.

Newport, Ark.—It is reported that the Arkansas Power Co., Arkadelphia, has recently purchased the property of the Co-operative Electric Light Co. Improvements, costing from $20,000 to $25,000, are contemplated. W. C. Maguire, Arkadelphia, is Mgr. and Supt. of the Arkansas Power Co.

Stuttgart, Ark.—See item under "Water Supply-Irrigation."

Montague, Tex.—A company is being organized for the purpose of establishing an electric-light plant in Montague. W. A. Parker, Dallas, is interested.

Palestine, Tex.—It is reported that the Texas Power & Light Co. has had plans prepared for a new electric-light and power plant at this place to cost about $83,000. C. A. Martin, Palestine, is local Mgr.

Victoria, Tex.—It is reported that the City Council plans to install a municipal electric-light plant at a cost of about $40,000.

Crested Butte, Colo.—At the election to be held Apr. 6 the question of issuing $15,000 in bonds for the purchase and improvement of the local electric-light plant will be submitted to the voters. The town is also considering taking over the water-works system.

Lordsburg, N. M.—The Lordsburg Water, Ice & Electric Co. is considering the installation of new equipment in the electric-light plant. It is also developing additional water supply for the town. R. E. Cameron is Mgr.

Battle Mountain, Nev.—It is reported that a power plant will be established at this place by H. R. Lemaine, H. C. Christensen and St. Clair Moore.

Ellensburg, Wash.—Bids will be received until Apr. 5 by Reuben Crimp, City Clk., for the construction of an auxiliary to the municipal power plant. The work includes the construction of the building, all concrete work, forebays, spillways, excavation, tailrace and basin, a 100-ft. concrete chimney, and the installation of a 1000-kw. turbine, 325-hp. boiler, switchboard, barometric condenser and feed water pump. The estimated total cost of the work is from $50,000 to $60,000 Noted Feb. 25.

Seattle, Wash.—The City Utilities Committee of the City Council has recommended the appropriation of $25,000 for the installation of an additional boiler in the Lake Union auxiliary steam plant of the municipal power plant to increase the output to a maximum of 10,000 kw.

Martinez, Calif.—The Contra Costa Gas Co. plans to install a pressure station and distributing system at Martinez to cost about $26,400. S. Waldo Coleman is Pres. and Gen. Mgr. of the company.

San Francisco, Calif.—The Trustees of Leland Stanford University have authorized the construction of an addition to the power house at Webster St. and Clay Ave. The estimated cost is $20,000.

Toronto, Ont.—It is reported that the Toronto Electric Commission will soon begin the construction of a new transformer house on Sterling Rd.

BRIDGES

Enosburg Falls, Vt.—Press reports state that the Selectmen have decided to build a concrete bridge, costing about $9000, to replace the present wooden structure across the Missisquoi River in this village.

New Haven, Conn.—Press reports state that the Board of Aldermen has authorized an issue of bonds for the construction of a $250,000 bridge over the Quinnipiac River in the City of New Haven. The bridge will be 650 ft. long and 66 ft. wide. Construction work will be begun some time in May. F. L. Ford is City Engr.

South Manchester, Conn.—(Official)—We are advised by J. Frank Bowen, Supt. of Streets and Bridges of the Town of Manchester, that no official orders have as yet been issued for the construction of a concrete bridge on Bissell St. Noted Mar. 18.

Elizabeth, N. J.—It is reported that the Board of Chosen Freeholders of Union County will have plans prepared by the Strauss Bascule Bridge Co., Chicago, Ill., for a trunnion type lift bridge over the Elizabeth River at Baltic St., Elizabeth. Jacob L. Bauer is County Engr. Noted May 14, 1914.

Jersey City, N. J.—Bids will be received until 3 p.m., Apr. 8, by the Board of Chosen Freeholders of Hudson County for repairing the pavement and painting the 14th St. Viaduct.

†Trenton, N. J.—(Official)—The Board of Chosen Freeholders of Mercer County has awarded the contract for the construction of a reinforced-concrete bridge over Sanhican Creek at Lee Ave. to WILLIAM F. McGOVERN, Trenton, at $9916. Other bidders were: S. J. Brown, Trenton, $9980; Whitaker & Diehl, Harrisburg, Penn., $10,156; Seeds & Durham, Philadelphia, $10,500; Ginder Construction Co., $10,743. Bids were opened Mar. 23. Noted July 2, Sept. 17, Dec. 31, 1914; Mar. 11, 1915.

Stuart, Va.—(Official)—Bids will be received until noon, Apr. 5, by the Clerk of the Circuit Court of Patrick County for the construction of a 100-ft. steel bridge across the Mayo River. G. P. Coleman, Richmond, is State Highway Comr.

Ranger, W. Va.—The Lincoln County Court, Hamlin, is having plans prepared by Oliver & Maupin, Huntington, W. Va., for a new steel bridge over the Guyan River at Ranger. The engineers will also supervise the construction.

Smithfield, W. Va.—Bids will be received until Apr. 6 by the Wetzel County Court, New Martinsville, for the construction of a steel or concrete bridge with concrete floor across Fallen Timber Run, about one mile from Smithfield. S. Myers is Clk. of County Court.

Goshen, Ala.—Bids will be received until Apr. 21 by the Board of Commissioners of Pike County, Troy, for the construction of a reinforced-concrete bridge over the Conecuh River at Smiley's Crossing near Goshen. W. S. Keller, Montgomery, is State Highway Engr.

Tupelo, Miss.—Bids will be received until Apr. 5 by the Commissioners of Lee County for one car steel I-beams and channels, and for furnishing and erecting a 60-ft. steel bridge. L. G. Smith, Tupelo, is Engr.

Nashville, Tenn.—It is reported that Davidson County will issue $250,000 in bonds to be used for the construction of a bridge over the Cumberland River.

Cleveland, Ohio—(Official)—Bids will be received until 10 a.m., Apr. 17, by the Board of Commissioners of Cuyahoga County for the construction of a reinforced-concrete beam bridge, Report No. 3353. E. G. Krause is Clk. of the Bd.

Hamilton, Ohio—Bids will be received until Apr. 17 by the Board of Commissioners of Butler County for the construction of a steel or reinforced-concrete bridge over the Miami River at Woodsdale. The estimated cost is $85,000. Fred M. Hammerle is County Surv. Noted Feb. 25 and Mar. 11.

†Sciotoville, Ohio—It is reported that the Chesapeake & Ohio Ry. has awarded all contracts for the construction of its bridge over the Ohio River from Sciotoville and Portsmouth, Ohio, to South Portsmouth, Ky. The contracts for the substructure and superstructure were awarded to the DRAVO CONTRACTING CO., Pittsburgh, and the McCLINTIC-MARSHALL CO., Pittsburgh, respectively. The structure will have two spans of 775 ft. each and approaches of 1900 ft. The estimated cost is $1,500,000. Noted Jan. 29, July 23 and Nov. 19, 1914.

Boonville, Ind.—(Official)—Bids will be received until 2 p.m., Apr. 7, by the Board of Commissioners of Warrick County for the construction of three bridges. The estimated total cost is $8000. Gaines H. Bass is County Audr. Noted Mar. 18.

Converse, Ind.—The Board of Commissioners of Miami County, Peru, will soon advertise for bids for the construction of a bridge near Converse. The estimated cost is $7000. Alternate bids will be received for either a steel or reinforced-concrete structure. F. J. McElheny, Peru, is County Audr.

Dayton, Ind.—The County Council of Tippecanoe County, La Fayette, has made an appropriation of $4000 for the construction of a steel or reinforced-concrete bridge at Sycamore Crossing near Dayton. Plans are not yet completed. G. W. Baxter is County Audr.

Evansville, Ind.—Bids will be received until 10 a.m., Apr. 9, by the Board of Commissioners of Vanderburg County for the construction of a number of reinforced-concrete and steel bridges with concrete abutments. C. P. Beard is County Audr.

Hammond, Ind.—Bids will be received until 10 a.m., Apr. 5, by the Board of Public Works for the construction of a concrete bridge, including substructure and superstructure, over the lagoon in Harrison Park. Peter J. Lyons is City Engr. Jacob Schroeter is a member of the Bd. of Pub. Wks.

✚Indianapolis, Ind.—(Official)—The Board of Commissioners of Marion County has awarded the contract for the construction of a bridge over Little Eagle Creek on the Crawfordsville Rd. in Wayne Township, to the CENTRAL STATES BRIDGE CO., Indianapolis, at $5395. Noted Mar. 18.

Benton Harbor, Mich.—Bids will be received until Apr. 7 by B. C. Spaulding, City Clk., for the construction of a reinforced-concrete bridge at Crystal Springs Cemetery.

Jackson, Mich.—(Official)—Bids will be received until Apr. 6 by the City Commissioners for the construction of a bridge over the Grand River at Mechanic St. A. W. D. Hall is City Engr. Noted Mar. 4.

Bloomington, Ill.—(Official)—Bids will be received until 1 p.m., Apr. 3, by R. O. Edwards, Supt. of Highways of McLean County, for the construction of a steel bridge on concrete abutments between Rutledge Township, DeWitt County, and Empire Township, McLean County. The estimated cost is $4650.

✚Pontiac, Ill.—(Official)—The Highway Commission of Livingston County has awarded the contract for the Young Bridge in Pontiac Township to JOSEPH KLEIN at $7474. There were 16 bids in all, ranging from that of the successful contractor to one of $10,490. Noted Jan. 21.

Milwaukee, Wis.—(Official)—We are advised by J. C. Pinney, Jr., Supt. of Bridges and Pub. Bldgs., that the construction of the State-Martin St. Bridge has been postponed for the present by the City Council. Nothing further will be done for two or three months. Noted Apr. 9, 1914; Jan. 7 and Feb. 11.

Clinton, Iowa—Bids will be received until Apr. 7 by the Board of Supervisors of Clinton County for the construction of about 20 bridges in the county. The estimated cost is $15,000.

Manchester, Iowa—The Board of Supervisors of Delaware County has passed a resolution of necessity for the construction of 11 bridges and culverts in the county. C. H. Bunker is County Audr.

Oskaloosa, Iowa—The Board of Supervisors of Mahaska County has passed a resolution of necessity for the construction of 41 new concrete bridges during the coming spring and summer. The estimated total cost is $34,000.

Waverly, Iowa—It is reported that the Board of Supervisors of Bremer County will advertise about Apr. 15 for bids for the construction of several bridges. C. A. Cool is County Engr. W. H. Pockle is Audr.

Duluth, Minn.—(Official)—Bids will be received until 9:30 a.m., Apr. 3, by O. Halden, Audr. of St. Louis County, for a steel bridge over Sand Creek on the Arkkola Rd.

Jackson, Minn.—Bids will be received until 1 p.m., Apr. 6, by P. D. McKellar, Audr. of Jackson County, for the construction of State Bridges Nos. 1629, 1702, 1706 and 1144; also for one reinforced-concrete box culvert.

✚Worthington, Minn.—(Official)—The Board of Commissioners of Nobles County has awarded the contract for the construction of five state bridges to THOMAS & STEHLY, Faribault, at $6227. G. Swanberg is County Audr. Noted Mar. 18.

✚Concordia, Kan.—(Official)—The Board of Commissioners of Cloud County has awarded the contract for the construction of five reinforced-concrete bridges to the WESTERN BRIDGE CO., Harrisonville, Mo., at $9677. Other bidders were: Canton Bridge Co., Kansas City, Mo., $11,000; Western Bridge & Construction Co., Omaha, Neb., $16,740; Leavenworth Bridge Co., Leavenworth, $12,500; Heaney Construction Co., Enid, Okla., $11,900; Scott Bros., Concordia, $11,367. George C. Guilbert is County Clk. Noted Mar. 18.

Eldorado, Kan.—Bids will be received until noon, Apr. 8, by the Board of Commissioners of Butler County for the construction and repair of county bridges. O. Holford is County Clk.

✚Newton, Kan.—(Official)—The Board of Commissioners of Harvey County has awarded the contract for the construction of two reinforced-concrete bridges to the HEANEY CONSTRUCTION CO., Enid, Okla., at $5100. Five other bids were received. C. A. Young is County Clk. Noted Mar. 18.

Topeka, Kan.—The State Senate has passed a bill permitting the City of Topeka to spend $10,000 for bridge construction without the formality of submitting the issue to a vote of the citizens. A. R. Young is City Engr.

Fullerton, Neb.—Bids will be received until noon, Apr. 19, by F. M. Jones, Clk. of Nance County, for furnishing bridge material such as oak plank, fir stringers, cypress piling, etc.

Red Cloud, Neb.—(Official)—All bids received Mar. 23 for bridge and culvert construction, and for furnishing steel I-beams and reinforcing rods were rejected by the Board of Commissioners of Webster County. J. J. Garber is County Clk. Noted Mar. 4.

Troy, Mont.—Bids will be received until Apr. 5 by Louis G. Klency, Clk. of Lincoln County, Libby, for the construction of a bridge over Lake Creek near Troy.

St. Louis, Mo.—(Official)—Bids will be received until noon, Apr. 9, by the Board of Public Service for about 15,000 lin.ft. reinforced-concrete piling for the Seventh Section of the Municipal Bridge. E. R. Kinsey is Pres., William T. Findly is Secy. of the Bd.

Chandler, Okla.—Bids will be received until 2 p.m., Apr. 5, by the Board of Commissioners of Lincoln County for the construction of three steel bridges across the main channel of the Deep Fork Drainage Ditch. J. C. Pringey is County Clk.

Tulsa, Okla.—An election will be held Apr. 12 at which the citizens of Tulsa County will vote on the question of issuing $200,000 in bonds, the proceeds of which will be used to build a bridge over the Arkansas River.

Salt Lake City, Utah—The State Senate has passed bills making appropriations for the following bridge construction: A bridge over the Green River on the Midland Trail, $7500; bridge over the Du Chesne River near Utahn, Wasatch County, $10,000; bridge over the Price River in Emery County, $6000.

Nogales, Ariz.—The State Legislature has appropriated $12,500 toward the construction of a bridge across the Santa Cruz River in Santa Cruz County, providing the county will appropriate a similar amount. It is expected the county will at once arrange to pay its share of the cost.

✚Bellingham, Wash.—The Commissioners of Whatcom County have awarded the contract for the construction of a 380-ft. steel bridge over the Nooksack River on the Guide Meridian Rd. to the WEYMOUTH CONSTRUCTION CO., Seattle, at $31,318. Other bidders were: Graff Construction Co., Seattle, $32,735; Central States Bridge Co., Seattle, $31,956; Illinois Steel Bridge Co., Seattle and Spokane, $34,949. C. M. Adams is County Engr. Noted Mar. 4.

Hoquiam, Wash.—It is reported that the City Council has decided to construct a drawbridge at Simpson Ave., estimated to cost $45,000. Charles E. Fowler, Central Bldg., Seattle, is Engr. John H. Neef is Comr. of Pub. Wks.

Marysville, Wash.—Bids will be received until Apr. 12 by the Board of Commissioners of Snohomish County, Everett, for the construction of a concrete culvert and fill or a reinforced-concrete viaduct on the Pacific Highway near Marysville. M. Weatherby is County Audr. Hans Mumm, Jr., is County Engr.

Olympia, Wash.—It is reported that plans for rebuilding the West Fourth St. Bridge, which recently collapsed, will be prepared at once by the City Engineer. The new structure will be of steel, estimated to cost $20,000.

Port Orchard, Wash.—Bids will be received until Apr. 6 by R. E. Gordon, Audr. of Kitsap County, for the construction of two concrete bridges, one at South Colby and the other at Silverdale. S. H. Berry is County Engr.

Shelton, Wash.—Arthur L. Ward, County Engr. of Mason County, has prepared plans for two new bridges on the Pump Creek Rd. It is reported that bids for their construction will be asked some time in April.

Hanford, Calif.—Bids will be received until Apr. 7 by the Board of Supervisors of Kings County for the construction of a reinforced-concrete bridge over Cross Creek near Hanford. B. E. Duffield is County Surv.

Maxwell, Calif.—Bids will be received until Apr. 6 by the Board of Supervisors of Colusa County, Colusa, for the construction of a concrete bridge at Maxwell. T. D. Cain, Colusa, is County Clk.

Sierra Madre, Calif.—The City Trustees have instructed W. F. Bixby, City Engr., to prepare plans for a reinforced-concrete bridge over the wash on Mariposa Ave., west of Lima St.

Lindsay, Ont.—Plans have been prepared by the Department of Public Works, Ottawa, for the construction of a swing bridge at Lindsay. Work will probably begin some time during the summer.

Toronto, Ont.—(Official)—Bids will be received until noon, Apr. 10, by A. L. Hertzberg, Div. Engr., Ontario Division of the Canadian Pacific Ry., for the construction of four concrete piers and two concrete abutments at Bridge 107.2, Muskoka Subdivision over Shaw's Creek, about 7½ miles south of Bala.

✚Winnipeg, Man.—The Board of Control has awarded the contract for the Lee River Bridge to the DOMINION BRIDGE CO., Montreal, Que., at 4⅝c. per lb. for the steel. The total cost of the bridge will be about $19,383. E. V. Caton is Ch. Engr. Noted Dec. 10 and Feb. 4.

Grand Forks, B. C.—It is reported that City Council will receive bids about Sept. 1 for the construction of a bridge over the Kettle River. The estimated cost is $6000. J. A. Hutton is City Clk.

WATER SUPPLY—IRRIGATION

Pittsfield, Maine—The Water Commissioners have been authorized to complete the water system and install meters. The estimated cost is $5000. T. E. Getchell is Clk.

Boston, Mass.—Bids will be received until Apr. 9 by the Supply Department for 2600 reinforced-concrete gate and meter boxes. D. Frank Doherty is Supt.

✚Boston, Mass.—The contract has been awarded to JOHN F. LYNCH at $16,455 for trench work for the water department for 1915. Other bidders were: Hugh McNulty, $17,428; Anthony Baruffaldi, $17,635, and Thomas Burke, $17,908. L. K. Rourke is Comr. of Pub. Wks.

★Barker, N. Y.—(Official)—Bids will be received until noon, Apr. 14, by the Board of Trustees for laying 4½ miles of c.-i. water mains, constructing a stand pipe, sand filter and pure water reservoir, pump house and pumping apparatus. Noted Jan. 7 and Feb. 11.

★Binghamton, N. Y.—(Official)—Bids will be received until 10 a.m., May 15, by the Board of Water Commissioners for installing one horizontal cross-compound high-duty crank and flywheel pumping engine of 10,000,000 gal. daily capacity. John D. Davidson is Secy.

Brocton, N. Y.—The citizens, at a recent election, voted in favor of issuing bonds for $20,000, the proceeds of which will be used for the extension of the water system.

Elmira, N. Y.—The citizens voted in favor of purchasing the system of the Elmira Water, Light, & R.R. Co. Cost, $1,500,000.

✚Jamestown, N. Y.—The contract has been awarded by the Board of Water and Light Commissioners to the UNITED STATES CAST IRON PIPE CO., Buffalo, at $21.10 per ton for c.-i. pipe and $0.27 per lb. for specials.

New York, N. Y.—(Official)—Bids will be received by the Board of Water Supply, Municipal Bldg., until 11 a.m., Apr. 13, for Contract No. 152 for paving five miles of highway with vitrified brick blocks and macadam and for constructing about eight miles of guard walls at the Ashokan reservoir, in the towns of Olive, Marbletown and Hurley. Charles Strauss is Pres.

✚New York, N. Y.—(Official)—Bids were received Mar. 23 for constructing six concrete, stone and brick buildings at and near the Kensico reservoir under Contract No. 123 as follows: F. W. BURNHAM, 30 East 42d St., New York, at $149,385 (awarded contract); William H. Egan, $166,425; A. L. Guidone & Co., $170,980; Conners Bros. Co., $162,825; P. J. Brennen & Sons, $217,564; W. P. Seaver, Inc., $172,978; Emerson Building Co., $151,057; Edwin Outwater, $165,570; Charles Meads & Co., $161,975; Simon Russek, Inc., $170,729; Madden & Co., $169,055; J. Kressi, $172,386; Marble Arch Co., $203,250; T. A. Clark Co., $179,703; L. Wessler, $177,949; James McArthur Co., $183,044; Kelly & Kelly, Inc., $178,940 and L. T. Freze, $189,430. Noted Mar. 4.

New York, N. Y.—(Borough of Manhattan)—(Official)—Bids will be received until 2 p.m., Apr. 7, by William Williams, Comr. of Water Supply, Gas & Electricity, for constructing a high pressure headquarters building at 226 West Broadway.

Oakfield, N. Y.—Bonds for $35,000 have been voted by the citizens. The proceeds will be used for the construction of a water system.

✚Syracuse, N. Y.—(Official)—The contract has been awarded to the DONALDSON IRON CO., Emaus, Penn., at $6000, for c.-i. pipe. R. D. Roney is Secy. Bids were opened Mar. 22. Noted Mar. 18.

Watervliet, N. Y.—The water bill providing for the issuance of $625,000 in bonds for the construction of a water-supply system has been adopted by the Board of Aldermen. Noted Mar. 11 and 18.

✚★Atlantic City, N. J.—The contract has been awarded to the KERR TURBINE CO., Real Estate Bldg., Philadelphia, Penn., at $14,317, for an 18,000,000-gal. turbo-centrifugal pump. Noted Mar. 4 and 25.

✚Atlantic City, N. J.—The contract for a slack lime excavator has been awarded by the Water Department to the INSLEY MFG. CO., Bulletin Bldg., Philadelphia, Penn., at $20,530.

Bloomfield, N. J.—Bids will be received until 8 p.m., Apr. 5, by Raymond F. Davis, Town Clk., for 80 tons of 8-in., 66 tons of 6-in. and 6 tons of 4-in. pipe and 2½ tons of specials.

Clinton, N. J.—Bids will be received until 2 p.m., Apr. 9, by the Board of Managers State Reformatory for making extensions to the water system. Noted Feb. 25.

Jersey City, N. J.—Frank Hague, Dir. of Pub. Safety, has been authorized by the Board of City Commissioners to have plans prepared for the installation of a high-pressure water system for fire service in the manufacturing district.

West Orange, N. J.—The West Orange Water Co. has submitted a proposition to the Council to increase the water supply. The construction of a 14-in. pipe line along the mountain ridge to empty into a concrete reservoir with a capacity of 3,000,000 gal. is contemplated; also the installation of an auxiliary pumping plant and a 20-in. pipe in Northfield Rd. C. P. Bassett is Pres. of the company. Noted Aug. 20 and Dec. 31.

Clayton, Del.—The town plans to build water and sewer systems, estimated to cost $20,000.

✚Baltimore, Md.—The Board of Awards, according to press reports, has awarded the contract to RICHARD MORTON, at about $18,000, for installing a 500-kw. turbo generator.

East New Market, Md.—(Official)—Bids will be received until Apr. 15 by the Board of Town Commissioners for constructing a water system. Kastenhuber & Anderson, Easton, is Engr. F. E. Loomis is Secy.

Bridgeport, W. Va.—Bids will soon be received for the construction of water and sewer systems and a pipe line. The estimated cost is $40,000. Hornor Bros., Hornor Bldg., Clarksburg, is Engr. Noted Feb. 4.

White Sulphur Springs, W. Va.—Bonds for $9500 have been voted. The proceeds will be used for construction of water and sewer systems. W. A. Martin is Mayor.

★Durham, N. C.—(Official)—Bids will be received until 3 p.m., Apr. 21, by W. J. Brogden, Mayor, and the Board of Aldermen for pumping-station equipment. The equipment consists of crank and flywheel pumping engines, turbine-driven centrifugal pumps, feed pumps, open feed-water heaters, 5-kw. and 7½-kw. D.C. electric-lighting units and Manning boilers. Gilbert C. White, Charlotte, is Engr. Noted May 7, June 4, 1914, and Jan. 21, 1915.

★Durham, N. C.—(Official)—Bids will be received until 3 p.m., Apr. 21, by W. J. Brogden, Mayor, and the Board of Aldermen for making improvements to the water system. Noted May 7, June 4, 1914, and Jan. 21.

Estill, S. C.—The J. B. McCrary Co., Atlanta, Ga., is preparing plans for the construction of a water system and electric-light plant. The estimated cost is $25,000.

Manning, S. C.—(Official)—Bids will be received until Apr. 13 by the Commissioner of Public Works for constructing water and sewer systems. The estimated cost is $40,000. The Shand Engineering Co., Columbia, is Engr. Noted Mar. 18.

Decatur, Ga.—Bonds for $7000 have been voted, the proceeds of which will be used for the improvement of the water system. F. T. Hopkins is Mayor. Noted Feb. 25.

Hawkinsville, Ga.—Bonds for $30,000 have been sold, the proceeds of which will be used for the extension of the water and sewer systems. Noted Feb. 4 and Mar. 4.

Key West, Fla.—About $15,000 will be spent for laying new water mains to replace the old ones. J. R. Valdez is Chn. Water-Works Com.

Vivian, La.—Bids will be received until Apr. 16 by J. D. Houston, City Clk., for constructing a water system. Estimated cost, $35,000. Edward W. Gantt Co., Dallas, Tex., is Engr. Noted Dec. 10 and Mar. 11.

Paducah, Ky.—Plans have been prepared for laying water mains in various streets for the Paducah Water Co. The estimated cost is $14,000.

✚Akron, Ohio—Contracts for pipe and specials have been awarded by the Board of Control as follows: RENSSELAER VALVE CO., Troy, N. Y., for fire hydrants at $58,089; UNITED STATES CAST IRON PIPE & FOUNDRY CO., Chicago, Ill., for pipe at $60,268, and to BOWLER FOUNDRY CO., Cleveland, for specials at $3080. Noted Mar. 4.

Cincinnati, Ohio—(Official)—Bids will be received until noon, Apr. 8, by Philip Fosdick, Dir. of Pub. Ser., for laying water mains.

Cincinnati, Ohio—(Official)—Bids will be received until noon, Apr. 8, by Philip Fosdick, Dir. of Pub. Ser., for constructing a horizontal turbine water wheel for the filtration plant at California, Ohio.

Cleveland, Ohio—Bids will be received until noon, Apr. 8, by A. R. Callow, Comr. Pur. and Supplies, for lead pipe for the water department.

Cleveland Heights, Ohio—(Warrensville post office)—Bids will be received until noon, Apr. 19, by H. H. Canfield, Village Clk., 803 Marshall Bldg., Cleveland, for laying water mains in various streets.

South Bend, Ind.—An ordinance has been passed by the City Council authorizing the issuance of $50,000 in bonds, the proceeds of which will be used for extension of the water system. J. W. Foyne is Supt. of Water Wks.

✚Grand Rapids, Mich.—The contract has been awarded to the LYNCHBURG FOUNDRY CO., Lynchburg, Va., at $23.40 per ton, for 600 tons of water pipe.

Jackson, Mich.—(Official)—Bids will be received until Apr. 6 by the City Commissioners for water pipe, hydrants, valves, cement and street castings. A. W. D. Hall is City Engr.

Saginaw, Mich.—At a recent election the citizens defeated the bond issue for $750,000, the proceeds of which was to have been used for the installation of a filtration plant and for making extensions to the water system. Noted Mar. 11.

✚Berwyn, Ill.—The contract has been awarded by the Board of Local Improvements to the CHARLES M. PORTER CO., 111 West Washington St., Chicago, for c.-i. water mains in 64th Ave. and other streets. Bids were opened Mar. 16. Noted Mar. 11.

Christopher, Ill.—(Official)—A water system, costing $37,500; a sewer system, costing $62,000, and sidewalks, costing $35,000, will be constructed soon. L. T. Putnam is Engr.-in-Charge. Noted Mar. 18.

Cicero, Ill.—Bids will be received until 8 p.m., Apr. 12, by Charles Stoffel, Town Clk., for laying water mains in West 12th and 15th St., and in South 62d Ave.

Columbia, Ill.—The Fuller-Coult Co., Chemical Bldg., St. Louis, Mo., is preparing plans for the construction of a water system.

Elmhurst, Ill.—(Official)—Bids will be received until Apr. 19 by the city for constructing an 18-in. artesian well. H. L. Emerson, Chamber of Commerce Bldg., Chicago, is Engr.

Monticello, Ill.—An election will be held to vote on the question of issuing $10,000 in bonds, the proceeds of which will be used for the improvement of the water system.

★Peoria Heights, Ill.—(Official)—Bids will be received until 8 p.m., Apr. 19, by the Board of Local Improvements for constructing a water system. E. J. Brayton is City Clk.

Bloomington, Wis.—Bids will be received about May 1 for constructing a water system. The estimated cost is $12,000. L. P. Wolff, St. Paul, is Consult. Engr. Noted Mar. 4.

★Milwaukee, Wis.—(Official)—Bids will be received until 10:30 a.m., Apr. 19, by Fred. G. Simmons, Comr. of Pub. Wks., for constructing the shore tunnel of the Linwood Ave. intake Noted Mar. 25.

Oconomowoc, Wis.—Bids will be received until 1 p.m., Apr. 7, by the Board of Public Works for laying water mains. J. Alex Stemper is City Engr.

✚Reedsburg, Wis.—(Official)—The contract has been awarded to the AMERICAN CAST IRON PIPE CO., Minneapolis, Minn., at $25.15 per ton, f.o.b. Reedsburg, for c.-i. pipe. William H. Dierken is City Clk. Bids were opened Mar. 22. Noted Mar. 18.

Colo, Iowa—The expenditure of $16,000 is contemplated by the citizens for the construction of a water system. Lawrence W. Cox, Youngerman Blk., Des Moines, is Engr.

✚Crawfordsville, Iowa—(Official)—The contract for constructing a water system has been awarded to the DES MOINES BRIDGE & IRON CO., Des Moines. R. S. Dix is City Clk. Noted Dec. 31 and Mar. 18.

Ft. Madison, Iowa—The citizens will either purchase the present water system or construct a new one.

Newton, Iowa—Bids will be received until Apr. 5 by O. B. Kipp, City Clk., for making improvements to the water system.

Stacyville, Iowa—A water system, estimated to cost $11,000, will be installed.

✚Yale, Iowa—The contract for constructing a water system has been awarded to the C. W. ROLAND CO., Des Moines, at $9198. Noted Mar. 11.

Detroit, Minn.—Plans have been prepared by L. P. Wolff, Consult. Engr., St. Paul, for making extensions to the water system. The estimated cost is $29,395. E. J. Bestick is City Clk.

†Kinney, Minn.—The contract for constructing a 100,000-gal. concrete reservoir has been awarded to the BUTLER & COONS CONTRACTING CO., Hibbing, at $4500. Noted Feb. 4.

†Osawatomie, Kan.—The contract has been awarded to the CONNOR CONSTRUCTION CO., 4006 Montgall Ave., Kansas City, at $10,065, for constructing a water system and filtration plant. Noted Sept. 10 and Dec. 3.

Broken Bow, Neb.—An election will be held to vote on the question of issuing bonds for $6500, the proceeds of which will be used for the improvement of the water system. Charles F. Sturtevant, Holdrege, is Engr. Noted Jan. 14.

Nelson, Neb.—Bids for constructing about 10 miles of 8-in. pipe line have been rejected by the City Council.

Belfield, N. D.—At an election held recently the citizens voted in favor of issuing bonds for $20,000, the proceeds of which will be used for the construction of a water system. Noted Mar. 18.

Laramie, Wyo.—Bids will be received until Apr. 13 by Z. E. Sezison, City Engr., for making extensions to the water system.

†Billings, Mont.—(Official)—Contracts have been awarded for making improvements to the water system as follows: to the GORDON & TAYLOR CONSTRUCTION CO., Denver, Colo., at $34,709, for laying six miles of c.-i. water mains; HANLON & OKES, Sioux City, Iowa, at $71,790, for constructing settling basins, filter basins and brick filter house; PITTSBURGH FILTER MFG. CO., Pittsburgh, Penn., at $35,-175, for installing six 1,000,000-gal. mechanical filter units; and to HANLON & OKES, Sioux City, Iowa, at $1950, for installing one turbine pump and electric motor. Burns & McDonnell, Kansas City, Mo., is Engr. Noted Jan. 14, Feb. 11 and Mar. 11.

Judith Gap, Mont.—The city plans to spend $10,000 for the construction of a municipal water system.

Chillicothe, Mo.—(Official)—Bids will be received until 8 p.m., Apr. 16, by P. J. Dixon, Secy. Bd. of Pub. Wks., for constructing a filtration plant for the water department. Harper & Stiles, Grand Ave. Temple, Kansas City, Mo., is Engr. Noted Mar. 11.

Kennett, Mo.—Bonds for $7000 have been voted. The proceeds will be used for the extension of the water system. Clyde Oakes is Mayor. Noted Feb. 25.

Bentonville, Ark.—The City Council has retained Albert C. Moore, Engr., Joplin, Mo., to estimate the cost of making extensions and repairs to the water system and electric-light plant and to test the efficiency of the present systems. Richard Rice is Mayor.

Booneville, Ark.—Winters & Dove, Ft. Smith, has been retained by the city to make surveys and estimate the cost of the construction of a water system.

†Ft. Smith, Ark.—According to press reports, the contract has been awarded to the WALLACE CONSTRUCTION CO., at about $30,000, for constructing a water system in District No. 2. Noted Mar. 25.

Stuttgart, Ark.—Plans are being prepared by F. L. Wilcox, Syndicate Trust Bldg., St. Louis, Mo., for the construction of a water system and electric-light plant. The estimated cost is $100,000.

Livingston, Tex.—Bids will be received until Apr. 7 by A. T. Feagin, Mayor, for water meters, fire hose and reels. Noted Oct. 15.

San Antonio, Tex.—Bids will be received until 4 p.m., Apr. 19, by Fred Fries, City Clk., for constructnig a 60-in. steel flume across the San Antonio River.

Crested Butte, Colo.—An election will be held Apr. 6 to vote on the question of issuing $50,000 in bonds, the proceeds of which will be used for the construction of a water system.

Gooding, Idaho—The Hagerman Valley Water Users' Association, Gooding, will overhaul its water system this spring. A new siphon across Billingsley Creek and a 20-in. stave pipe line 800 ft. long will be constructed. George Hulme is Secy.

Samaria, Idaho—An election will be held Apr. 27 to vote on the question of issuing $20,000 in bonds, the proceeds of which will be used for the construction of a municipal water system.

†Salt Lake City, Utah—The contract has been awarded, according to press reports, to PARROTT BROS., Baker City, Ore., by the City Commission for laying water mains during 1915. Bids opened Mar. 16. Noted Dec. 31 and Mar. 11.

Seattle, Wash.—The City Council has passed an ordinance authorizing the construction of a water tunnel under the government canal at Third Ave., W.

Eugene, Ore.—Bids will be received until Apr. 3 by C. W. Geller, Secy. Water Dept., for constructing a reinforced-concrete reservoir with a capacity of 2,500,000 gal. F. W. Dietrich is Engr. Noted Oct. 8, Feb. 11 and Mar. 4.

Fairview, Ore.—The City Council has postponed for one year the issuance of bonds for constructing a municipal water system. Noted Mar. 18.

†Los Angeles, Calif.—Contracts have been awarded for water meters to the NEPTUNE METER CO., GAMON METER CO., THOMPSON METER CO., WATCHDOG METER CO., and the HERSEY METER CO. Total cost, $60,000.

★Sacramento, Calif.—(Official)—Bids will be received until 10:30 a.m., Apr. 20, by M. J. Desmond, City Clk., for laying c.-i. and riveted steel water mains in various streets.

†Port Hope, Ont.—Contracts have been awarded by R. Gray, Secy., Water Comrs., for making improvements to the water system as follows: CANADIAN FAIRBANKS-MORSE CO., for pumps and engines; FRANCIS HANKIN & CO., Toronto, for venturi meters; THOMAS GARNETTE & SONS, Port Hope, for filter; NATIONAL IRON WORKS CO., Toronto, for c.-i. pipe; and DRUMMOND, McCALL & CO., Montreal, Que., for valves. Bids were opened Mar. 15. Noted Mar. 11.

Trenton, Ont.—The Council has authorized the installation of water mains and hydrants, according to press reports. The estimated cost is $35,000. O. W. Fortune is Mayor.

Humboldt, Sask.—Chipman & Power, Toronto, Ont., is preparing plans for the construction of a distributing system, estimated to cost $110,000. W. H. Stiles is Town Clk.

†Saanich, B. C.—The contract has been awarded to BALFOUR, GUTHRIE & CO., at $139,841 for pipe and at $9063 for specials for the water system. Bids opened Mar. 12. Noted Feb. 11.

SEWERS

Derry, N. H.—Dudley & Sawyer, Manchester, is preparing plans for the construction of a sewer system and sewage disposal plant for Derry and West Derry. Arthur Greenough is Chn. Sewer Com.

Boston, Mass.—Bids will be received until Apr. 5 by the Department of Public Works for constructing sewers and drains in Anawan and Nikisch Ave., West Roxbury, and in Mackin and Richards St., Brighton District. L. K. Rourke is Comr.

Boston, Mass.—Bids will be received until Apr. 2 by the Department of Public Works for constructing sewers and drains in Brunswick St., Dorchester District. L. K. Rourke is Comr.

Wellesley, Mass.—According to press reports bids will soon be received for the construction of a sewer system to connect with the South Metropolitan system. The estimated cost is $150,000. Noted Mar. 18.

West Haven, Conn.—Plans have been prepared by Clyde Potts, 30 Church St., New York, N. Y., for the construction of a sewer system and pumping station. The estimated cost is $110,000.

Avon, N. Y.—At a recent election the citizens voted in favor of issuing bonds, the proceeds of which will be used for the construction of sewers in Reed, Rochester and in several other streets. W. H. Clark is Village Clk.

†Brighton, N. Y.—The contract has been awarded to the BISHOP CONSTRUCTION CO., 442 Cutler Bldg., Rochester, at $13,000, for constructing a sewage-disposal plant. Bids were opened Mar. 18. Noted Mar. 11.

Buffalo, N. Y.—Bids will be received until Apr. 3 by F. G. Ward, Comr., Dept. of Pub. Wks., for constructing an 8-ft. brick sewer in Swan and Seneca St.; a 4-ft. 4-in. sewer in Calais St.; alternate bids for brick, reinforced-concrete pipe and vitrified segment block sewer in Fillmore Ave. and Northumberland Ave.

New York, N. Y.—(Borough of Brooklyn)—(Official)—Bids will be received until 11 a.m., Apr. 9, by L. H. Pounds, Borough Pres., for constructing sewers in Tompkins Ave., Fulton St. and in Brooklyn Ave.

New York, N. Y.—(Borough of Brooklyn)—(Official)—C. F. Mentzinger & Co., 355 Broadway, Brooklyn, at $9342, was low bidder for sewerage work in Prospect Park. Noted Mar. 18.

New York, N. Y.—(Borough of Brooklyn)—(Official)—Pasqualle Tomasetti, 1133 60th St., Brooklyn, was low bidder at 86% of standard, for constructing sewers in 15th Ave. Noted Mar. 18.

New York, N. Y.—(Borough of Brooklyn)—(Official)—Frank Merrindino, Inc., 556 17th St., Brooklyn, at 70% of standard, was low bidder for constructing sewers in East 27th St. Noted Mar. 18.

New York, N. Y.—(Borough of Manhattan)—(Official)—Bids will be received until 2 p.m., Apr. 5, by Marcus M. Marks, Borough Pres., for sewerage work in 111th St. near Second Ave.

†New York, N. Y.—(Borough of Queens)—(Official)—Contracts have been awarded for sewerage work as follows: PAINO BROS., at $46,309, for sewers in Nebraska, Liberty and Garden St.; ARTHUR DUMPROFF, at $11,308, for sewers in Hancock St., Graham and Sanford Ave., and to H. BRITTON, at $12,881, for sewers in Fulton St. and Greenwood Ave. Noted Mar. 11.

Ravena, N. Y.—(Official)—Bids will be received until Apr. 10 by the Board of Village Trustees for constructing five miles of vitrified pipe sewers and a sewage treatment plant. A. L. Swanson is Village Clk. and Morrell Vrooman, Gloversville, is Engr. Noted Dec. 24 and Mar. 25.

Syracuse, N. Y.—Plans have been approved by the State Department of Health for the construction of a storm water sewer, estimated to cost $70,000.

Dunellen, N. J.—Bids will be received until 8 p.m., Apr. 5, for constructing storm drains in North Ave., Madison Ave. and in Front St.

Gloucester, N. J.—Pew & Hubbard has been retained by the City Council to prepare plans for the construction of a sewage-disposal plant. Noted Dec. 3.

Oaklyn, N. J.—Bids will be received until Apr. 6 by the Borough Council for constructing a sewer system and sewage disposal plant. Remington & Vosburg, 601 Market St., Camden, is Engr. Noted Dec. 3 and Mar. 11.

Trenton, N. J.—Bids will be received until 2:30 p.m., Apr. 2, for constructing sewers in North Cook and Barnt Ave. and in Nitz and Kuhn Alleys.

Verona, N. J.—An election will be held Apr. 27 to vote on the question of issuing $80,000 in bonds, the proceeds of which will be used for the construction of a sewer system. Ernest N. Bush is Chn. of the Sewer Com.

Annville, Penn.—(Official)—Bids will be received until Apr. 17 by the Commissioners of Annville Township at the office of W. Elmer Heilman, Township Clk., for constructing a storm sewer.

Connellsville, Penn.—Bids will be received until 8 p.m., Apr. 5, by the city for constructing sewers. Charles F. Hirst, Second National Bank Bldg., is Engr.

Downingtown, Penn.—An ordinance has been passed by the Borough Council authorizing the issuance of $70,000 in bonds, the proceeds of which will be used for the construction of a sewer system and sewage disposal plant. Noted Oct. 22 and Nov. 5.

Franklin, Penn.—The construction of a new sanitary sewer system is under consideration by the Borough Council. A. B. Curry is Borough Engr.

Greenville, Penn.—Bids will be received until Apr. 19 by the Borough Council for constructing a sewage-disposal plant and intercepting sewers. Chester & Fleming, Pittsburgh, is Engr. Noted Sept. 24 and Feb. 25.

✝Parkesburg, Penn.—The contract for constructing about four miles of sanitary sewers and a sewage-treatment plant has been awarded to RUNDLE & BELVIN, Reading. Noted Mar. 18.

Uniontown, Penn.—Bids will be received until Apr. 6 by A. E. Jones, City Clk., for constructing 1200 ft. of 18-in. and 1965 ft. of 24-in. sewers.

★Baltimore, Md.—(Official)—Bids will be received until 11 a.m., Apr. 14, by the Board of Awards at the City Register's office for Contract No. 149 for covering Section 1 of the Gwynn's Falls intercepter. John Hubert is Act. Pres. Bd. of Awards.

Rockville, Md.—According to press reports, bids for the construction of a sewer system have been rejected. Noted Nov. 26.

Richmond, Va.—Bids will be received until Apr. 2 for the construction of a section of the Bacon quarter branch sewer.

White Sulphur Springs, W. Va.—See item under "Water Supply-Irrigation."

Clinton, N. C.—Bids will be received until Apr. 28 by A. B. Crumpler, Mayor, for constructing 5½ miles of vitrified pipe sewers. William M. Piatt, Durham, is Engr.

Manning, S. C.—(Official)—See item under "Water Supply-Irrigation."

Decatur, Ga.—Bonds for $18,000 have been voted by the citizens, the proceeds of which will be used for the extension of the sewer system. F. T. Hopkins is Mayor.

Savannah, Ga.—The citizens contemplate issuing bonds for $600,000, the proceeds of which will be used for the completion of the sewer system.

South Jacksonville, Fla.—The City Council contemplates spending $65,000 for the construction of sewers and for paving.

Birmingham, Ala.—Julian Kendrick, City Engr., has been authorized by the City Council to prepare plans for the construction of sanitary sewers in the vicinity of 43d St. and 10th and 11th Ave., East Birmingham. The estimated cost is $5000.

Covington, Ky.—The construction of a trunk sewer in Latonia Ave. at an estimated cost of $25,000 is under consideration by the Department of Public Improvements.

Cleveland Heights, Ohio—Bids will be received until Apr. 19 by H. H. Canfield, Village Clk., for the construction of sanitary sewers in De Soto Ave. and Lee Rd. The F. A. Pease Engineering Co., Marshall Bldg., Cleveland, prepared the plans.

✝Granville, Ohio—The contract for the construction of sewers has been awarded to CHAPMAN & GLOVER, Lorain, at $19,388; for the disposal plant to the G. E. SCOTT ENGINEERING CO., Norwalk, at $14,316. Noted Feb. 18.

Springfield, Ohio—The lowest bid for the construction of sewers in Scioto and Kenton St. was that of Boyd & Cook, Dayton, at $7872. The same company submitted the lowest bid, $5105, for constructing sewers in North Main and Miami St. Charles F. Smith & Co., Dayton, was the lowest bidder at $9342 for the construction of a sewer in South Main St. Noted Feb. 25.

Toledo, Ohio—(Official)—H. H. Wagenhals, Asst. Engr., advises that the Sanitary Engineering Department of Lucas County, Ohio, is preparing plans for a sewage-pumping station, having a maximum capacity of 1000 gal. per min. It has not been decided whether to install ejectors or centrifugal pumps. This station is to be one of several to be constructed in the near future. William H. Gould is County Sanitary Engr.

Gary, Ind.—All former action for the construction of District Sewer No. 24 has been recinded by the Board of Public Works and new plans are being prepared. W. J. Fulton is City Engr. Noted Mar. 18.

✝Indianapolis, Ind.—The contract for the construction of sewers in Cottage Ave. and Draper St. has been awarded to GEORGE W. SCHAUER & SON, at $9652.

Ishpeming, Mich.—Press reports state that the citizens have voted $30,000 in bonds, the proceeds to be used in defraying the cost of a sewer system.

Christopher, Ill.—(Official)—See item under "Water Supply-Irrigation."

Columbia, Ill.—Preliminary plans are being prepared by the Fuller-Coult Co., Consult. Engr., Chemical Bldg., St. Louis, for the proposed sewer system.

Janesville, Wis.—Bids will be received until Apr. 16 by the Board of Public Works for the construction of sewers in Sewerage Districts 5, 10, 11, 14 and 15, about 621 lin.ft. of 8- to 12-in. sewers. C. V. Kerch is City Engr. Noted Jan. 14.

Oconomowoc, Wis.—Plans are being prepared for approximately two miles of 12-, 18- and 24-in. storm sewers. W. E. Reichardt is Engr. H. J. Schoenike is City Clk.

Oshkosh, Wis.—Bids will be received by the Board of Public Works until Apr. 6 for the construction of sections of sewer in Seventh and Lincoln Ave. and in Evans, Sterling, Tenth and other streets.

✝Burlington, Iowa—The contract for the construction of the Gnahn St. sewer and branches, about 16,900 lin.ft., has been awarded to YOUNG & BUSCHER CONSTRUCTION CO., Burlington, at $1.22 per lin.ft. H. G. Vollmer is City Engr.

Hartley, Iowa—Bruce, Standevan & Boynton, Engr., 430 Lee Bldg., Omaha, Neb., is preparing plans for a sewer system to cost about $35,000. H. T. Broder is Town Clk.

Jewell Junction, Iowa—(Jewell post office)—The Town Council has passed a resolution for the construction of a sanitary sewer system, disposal plant and outlet sewers. M. J. Severson is Town Clk.

Lake Mills, Iowa—M. Tschirgi & Sons, Engr., American Trust Bldg., Cedar Rapids, is preparing plans for a sewer system and disposal plant. The estimated cost is $25,000. A. Aasgaard is Mayor.

Lake View, Iowa—Plans are being prepared by Bruce, Standevan & Boynton, Engr., Bee Bldg., Omaha, Neb., for a sewer system estimated to cost about $13,000. E. P. Hartman is Town Clk.

✝Leon, Iowa—(Official)—The contract for sewer work has been awarded to GEORGE M. KING, Des Moines, Iowa, at $33,896. For the construction of the disposal plant to the PICKUS ENGINEERING & CONSTRUCTION CO., Sioux City, at $8874. Noted Mar. 11.

✝Mason City, Iowa—The contract for the construction of sewers, 8-, 10- and 15-in. pipe, has been awarded to S. R. BOWEN, Main St., Mason City, at about $26,500. J. Stanton is Mayor. Noted Mar. 4.

✝Onawa, Iowa—The city has awarded the contract for the construction of sanitary sewers to the INTER-MOUNTAIN BRIDGE & CONSTRUCTION CO., Tecumseh, Neb., at $38,383; for the disposal plant to C. B. REYNOLDS, Council Bluffs, at $11,867.

Sanborn, Iowa—Plans are being prepared and bids will be received about June 1 for the construction of approximately four miles of sewers and a disposal plant. F. A. Edquist, Omaha National Bank Bldg., Omaha, Neb., is Engr. J. H. McNeil is Mayor.

Sioux City, Iowa—Press reports state that bids will be received by Paul J. Wells, City Clk., for the construction of storm sewers in 29th St., Douglas to Grandview Blvd., in Grandview Blvd., 20th to 22d St., in Ingleside Ave., 16th to Dale St., and from 19th to 20th St.

State Center, Iowa—Bids will be received until Apr. 15 by J. W. Sparks, Town Clk., for the construction of a sanitary sewerage system, about 24,213 lin.ft. of 8- and 10-in. sewer; also a disposal plant having a 50,000-gal. capacity reinforced tank, sand filters and accessories.

St. Cloud, Minn.—Bids will be received until Apr. 13 by George G. Magnuson, City Clk., for the construction of sewers in District No. 6, requiring 10,063 ft. of 8- to 15-in. pipe sewers, 28 manholes and four flush tanks.

Wisner, Neb.—An election will be held on Apr. 9 to vote on a bond issue of $20,000 for the construction of a sewer system. Bruce, Standevan & Boynton, Omaha, is Engr. C. S. Daily is City Clk.

Belgrade, Mont.—A survey is being made by the C. H. Green Co., Consult. Engr., Spokane, Wash., for the proposed sewerage system. Noted Mar. 25.

Judith Gap, Mont.—The City Council is considering the installation of a sewer system in the business section of the town and a septic tank. The estimated cost is $7000.

McGehee, Ark.—The Council has under consideration an ordinance authorizing the expenditure of $90,000 for municipal improvements. About $30,000 will be used for a sewer system.

San Antonio, Tex.—Bids will be received by F. Fries, City Clk., on Apr. 12 and 19, respectively, for the following sewer work: Constructing approximately 1300 ft. of 60-in. sanitary sewer to connect with the steel flume across San Antonio River; constructing a 60-in. steel flume across the same river.

✝Limon, Colo.—The contract for the construction of a sewer system is reported awarded to the GEORGE H. SETHMAN CO., Denver.

Parma, Idaho—The City Council plans to build 5000 lin.ft. of sewers during the summer. It is reported that bids will soon be received.

Ogden, Utah—Washington Jenkins, City Engr., estimates the cost of the proposed storm water sewer in Madison Ave., 20th to 27th St., at $15,000, and from 27th to Ogden River at $21,000.

Mesa, Ariz.—The Sewer Commission of the City Council has engaged Julius Aichele, a representative of John Sandburg & Co., Engr., Denver, Colo., to prepare preliminary plans for the construction of a sewer system. The estimated cost is $75,000.

Aberdeen, Wash.—Press reports state that bids will be received until Apr. 28 for the construction of a sanitary sewer system in West Aberdeen. The work includes laying 32,000 ft. 8-in. vitrified pipe, 12,000 ft. of 10-in., 2100 ft. of 12-in., 1500 ft. of 15-in., 1400 ft. of 20-in., 1400 ft. of 24-in., 700 ft. of 30-in. and 3100 ft. of 36-in. Also 225 manholes. Louis D. Kelsey is City Engr.

Spokane, Wash.—It is reported that the City Council has ordered changes in sewers because of the grade separation at the tracks of the Northern Pacific Ry. The estimated cost is $50,000. Bids will be received for three groups: Sprague Ave. and Division St., Third and Fourth Ave., crossing Northern Pacific right-of-way, Fifth Ave. and Cannon St. Morton McCartney is City Engr.

Tacoma, Wash.—Press reports state that the City Commission is considering the construction of sanitary sewers in South 38th St. The estimated cost is $13,000.

✝Ontario, Calif.—The contract for the construction of an outfall sewer connecting with the proposed sewer system has been awarded to J. CHUTUK, Los Angeles, at $14,540. Noted Jan. 14 and Feb. 11.

✝Santa Barbara, Calif.—The City Trustees have awarded a contract for sewer work in the downtown district to A. L. PENDOLA and E. A. GARLAND, Santa Barbara, at $10,440.

Stockton, Calif.—The City Commissioners have approved the plans of C. E. Grunsky, Engr., San Francisco, and H. T. Compton, City Engr., for the proposed sewer system. Noted Dec. 24 and Jan. 7.

Turlock, Calif.—The City Council will receive bids until Apr. 6 for constructing sewers in West Main St. to the city limits.

Ottawa, Ont.—The City Council plans to construct 9- and 12-in. sewers of tile in Burnside, Carruthers, Hinchey, Forward, Parkdale and Emerson Ave. The estimated cost is $24,635. John Henderson is City Clk.

Vancouver, B. C.—The Board of Public Works has been asked by the City Engineer to call for bids for the construction of 1120 ft. of 42-in. reinforced-concrete pipe sewer and 800 ft. of 30-in. concrete pipe sewer for Carolina St. in Ward 6. Other sewer work to cost $43,380 has been recommended.

West Kitsilano, B. C.—The City Council has approved plans already prepared by the City Engineer for the construction of sewers throughout the city. The estimated cost is $50,000. Construction will be begun as soon as finances are arranged.

GARBAGE

Yonkers, N. Y.—The following bids were received by the Board of Contract and Supply, Mar. 15 for the construction of a garbage crematory: Y. J. Booth, Construction Co., New York, $51,512; George T. Kelly, $63,000; John M. Voss, $64,416; Kelly Construction Co., $64,750; Stevenson & Murray Co., $68,250, and Lynch & Larkin, $71,050. D. F. Fulton, City Engr. Noted Oct. 22.

✝Charlotte, N. C.—(Official)—The contract for the construction of an incinerator has been awarded to J. W. HAAS at about $18,000. Samuel H. Lea is City Engr. Noted Aug. 27.

Toronto, Ont.—The Board of Control received 16 bids for the construction of the Don incinerator. The Street Commissioner has recommended that the Canadian Griscom-Russell Co. be awarded the contract at $49,200, a Sterling incinerator to be installed. The next lowest bid was that of Self Bros., at $57,500. Noted Nov. 19 and Mar. 18.

STREETS AND ROADS

Boston, Mass.—Bids will be received until Apr. 6 by the State Highway Commissioner for the construction of 10,200 lin.ft. of road in Duxbury; 3800 lin.ft. in Grafton, and 5200 lin.ft. in Gloucester. Arthur D. Dean, 15 Ashburton Pl., is Ch. Engr.

Northampton, Mass.—Bids will be received until noon, Apr. 3, by the Superintendent of Streets for 50,000 gal. road oil, 40 to 60% asphalt.

Pittsfield, Mass.—Bids will be received until April 9 by Board of Public Works for ten cars of 45% asphaltic road oil. Louis B. Cummings is Clk. of the Bd.

Revere, Mass.—Bids will be received until Apr. 5 by the Public Works Department for the construction of granolithic sidewalks during 1915. Carl G. Richmond is Supt.

Hartford, Conn.—Bids for state road work were received by the State Highway Commissioner Mar. 22, as follows: Wethersfield Township, about 7860 lin.ft. of bituminous macadam on Maple, Mill and Prospect St., Pierson Engineering & Construction Co., Hartford, $13,390; Olmsted & Olmsted, Inc., East Hartford, $14,757, Leonardo Suzio, Meriden, $12,771; Connecticut Good Roads & Construction Co., New Britain, $14,527; A. Brazos & Sons, Middletown, $13,672; Lane Construction Corporation, Meriden, $12,751; Thomas Kearney, Meriden, $13,282; B. D. Pierce, Jr. Co., Bridgeport, $12,748. Enfield Township, 8650 lin.ft. of three-in. trap rock macadam on South St. A. E. Douglas, Glastonbury, $10,668; Leonardo Suzio, Meriden, $10,816; A. D. Bridge's Sons, Inc., Hazardville, Conn., $9779. South Windsor Township, about 8310 lin.ft. of bituminous macadam on Deming St., Thomas Kearney, Meriden, $20,920; Olin T. Benedict, Pittsfield, $16,319; B. Perini & Co., Ashland, Mass., $17,166; John DeMichiel & Bro., Torrington, $18,588; A. D. Bridge's Sons, Inc., Hazardville, $14,180; Louis Longhi & Bro., Torrington, $18,819; Connecticut Good Roads & Construction Co., New Britain, $16,858; Leonardo Suzio, Meriden, $14,172; A. Brazos & Sons, Middletown, $14,167; Pierson Engineering & Construction Co., Hartford, $17,415; B. D. Pierce, Jr. Co., Bridgeport, $16,352. Bloomfield Township, about 6610 lin.ft. of native stone macadam on the Simsbury Rd., Louis Longhi & Bro., Torrington, $14,945; Connecticut Good Roads & Construction Co., New Britain, $15,159; A. D. Bridge's Sons, Inc., Hazardville, $15,365; A. Brazos & Sons, Middletown, $14,421; John DeMichiel & Bro., Torrington, Conn., $14,247; Robert G. Miller Contracting Co., Hartford, $13,620; also 6879 lin.ft. trap rock macadam and macadam resurfacing on the Blue Hills Rd.; Louis Longhi & Bro., Torrington, Conn., $11,865; Connecticut Good Roads & Construction Co., New Britain, $13,468; A. D. Bridge's Sons, Inc., Hazardville, $11,971; A. Brazos & Sons, Middletown, $12,243; John DeMichiel & Bro., Torrington, $11,548; Robert G. Miller Contracting Co., Hartford, $11,594; John Arborio, New Haven, $11,930; A. C. Sternberg, Jr., Construction Co., West Hartford, $13,413; B. D. Pierce, Jr. Co., Bridgeport, $10,964; Pierson Engineering & Construction Co., Hartford, $13,055. Stamford Township, about 4810 lin.ft. of native stone macadam (a) or gravel (b) on the Long Ridge Rd. Goodman & Trumbull Co., Torrington, (a) $12,481 (b) $9039; A. D. Bridge's Sons, Inc., Hazardville, (a) $11,082; Peter Mitchell, Greenwich, (a) $12,654, (b) $8648; A. Brazos & Sons, Middletown, (a) $9731, (b) $6859; John Arborio, New Haven, (a) $10,270, (b) $6180, Louis Longhi & Bro., Torrington, (a) $12,943, (b) $8375; Kellogg & Gregory Co., Danbury, Conn., (a) $11,227, (b) $7715; H. Sanford Osborn, Redding Ridge, (a) $11,374, (b) $7504; B. D. Pierce, Jr. Co., Bridgeport, (a) $10,507, (b) $7680; Angelo Roina, Greenwich, Conn., (a) $20,031, (b) $10,100; Frank Palmer, Stamford, (a) $13,509, (b) $8748; T. F. Foley & Co., South Norwalk, (a) $12,766, (b) $11,937; William H. Arthur, Stamford, (a) $11,473. Windham Township, about 6930 lin.ft. of gravel road on the Windham-Scotland Rd. Frank Arrigoni & Bro., Middletown, $11,358; Goodman & Trumbull Co., Torrington, $11,609; Framingham Construction Co., Framingham, Mass., $9632; A. D. Bridge's Sons, Inc., Hazardville, $10,966; A. Brazos & Sons, Middletown, $9642; Connecticut Good Roads & Construction Co., New Britain, $11,547; Dean L. Chilson, Franklin, Mass., $13,529; B. N. Beard, Co., Shelton, $11,880; A. Vito, Construction Corp., Thompson, $11,559; Archie B. Cadwell, New Britain, $11,737; Ahern Construction Co., Willimantic, $12,345; Fred E. Ellis, Melrose, Mass., $14,686. Columbia Township, about 9964 lin.ft. of native stone macadam on the Columbia Green Rd. Fred E. Ellis, Melrose, Mass., $28,054; Connecticut Good roads & Construction Co., New Britain, $21,976; Goodman & Trumbull, Co., Torrington, $21,876; Frank Arrigoni & Bro., Middletown, $22,271; A. Brazos & Sons, $19,725; A. D. Bridge's Sons, Inc., $20,802; Ahern Construction Co., Willimantic, $20,323; Robert G. Miller, Contracting Co., Hartford, $18,354; Archie B. Cadwell, New Britain, $20,047; A. Vito, Construction Corp., Thompson, $19,181; Caputo & Giovaninni, 178 North St., Boston, Mass., $18,810. Waterbury City, about 10,100 lin.ft. of 8-in. gravel on Thomaston Ave. C. W. Tryon, Meriden, $16,443; Connecticut Good Roads & Construction Co., New Britain, $12,217; John Arborio, New Haven, $14,148; Goodman & Trumbull Co., Torrington, $18,331; B. Perini, Ashland, Mass., $13,536; Barbara & D'Auria, Waterbury, $14,849; Framingham Construction Co., Framingham, Mass., $14,293; B. N. Beard Co., Shelton, $17,465; E. B. Reilly, Waterbury, $15,611; H. Sanford Osborn, Redding Ridge, $15,610; Pierson Engineering & Construction Co., Hartford, $16,391; John DeMichiel & Bro., Torrington, $12,884; Thomas Kearney, Meriden, $16,012; B. D. Pierce, Jr. Co., Bridgeport, $13,319; A. Brazos & Sons, Middletown, $15,052; Louis Longhi & Bro., Torrington, $391,442; Andreani & Buzzi, Torrington, $14,116. Noted Mar. 18.

Manchester, Conn.—Bids will be received until 5 p.m., Apr. 3, for the construction of about 60,000 sq.ft. of concrete walks and 10,000 ft. of concrete curbing. J. Frank Bower is Supt. of Streets.

✝Meriden, Conn.—(Official)—Contracts have been awarded for paving State St. with wood block to LEONARDO SEIZIO, 185 Lewis Ave., Meriden, and for brick paving to THOMAS KEARNEY, at $8388. Noted Mar. 11.

New Haven, Conn.—Bids will be received until 2 p.m., Apr. 5, by F. L. Ford, City Engr., for improving Harriet St.

★Albany, N. Y.—(Official)—Bids will be received until 1 p.m., Apr. 20, by Edwin Duffey, State Highway Comr., for improving highways in various counties.

Albany, N. Y.—Press reports state that Edwin Duffey, Highway Comr., has decided to reject all bids received for the construction of a road around the base of Storm King Mountain.

✝★Albany, N. Y.—(Official)—Bids were received by the State Highway Commission, 55 Lancaster St., Mar. 23 for the construction of public highways, by State Aid as follows:

Road No. 965-A, Allegheny County, 9.52 miles—Richard Hopkins, Troy, $19,676; Flood & Van Wirt Co., Hudson Falls, $19,149; Kennedy Construction Co., Albany, $19,449; McGREEVEY, McGUIGAN & BAUM CONSTRUCTION CO., Elmira, $17,968 (awarded contract); P. J. Kennedy, Utica, $19,502; Bison City Engineering & Contracting Co., Buffalo, $18,997; Dale Engineering Co., Utica, $18,468.

Road No. 5543, Cattaraugus County, 6.98 miles—I. M. Ludington & Sons, Inc., Rochester, $120,749; George Holler, Albany, $119,438; AUSTIN W. SUMMERS, Buffalo, $107,770 (awarded contract); Woolsey Construction Co., Davenport, Iowa, $115,072; M. Bennett & Sons, Indiana, Penn., $112,060; Bison City Engineering & Contracting Co., Inc., Buffalo, $123,270; Lesher, Roess & Lesher, Oil City, Penn., $114,507.

Road No. 5258-A, Cattaraugus County, 5.35 miles—George Holler, Albany, $95,348; I. M. Ludington & Sons, Inc., Rochester, $96,560; Serviss & Mackey, Youngstown, $93,800; AUSTIN W. SUMMERS, Buffalo, $90,223 (awarded contract); Lake Shore Construction & Supply Co., Dunkirk, $94,730; Michael H. Ripton, Rochester, $93,995; James Rossney, Buffalo, $95,792.

Road No. 1230, Columbia County, 4.97 miles—Brady & Oltarsh, New York, $61,736; James Garafano & Sons, Mt. Vernon, $60,817; C. W. Tyrone, Boyntonville, $62,549; RUSSO-PARKER CONSTRUCTION CO., Hudson, $58,922 (awarded contract); John L. Hayes Construction Co., Yonkers, $60,492; Harris-Rose Construction Corporation, New York, $62,811; H. B. Sproul Construction Co., Inc., Peekskill, $61,654.

Road No. 5546, Erie County, 4.48 miles—Michael H. Ripton, Rochester, $69,764; Harry B. Harrison, East Rochester, $71,206; Lake Shore Construction & Supply Co., Dunkirk, $71,301; AUSTIN W. SUMMERS, Buffalo, $69,736 (awarded contract); John Johnson Construction Co., Buffalo, $70,484; Louis H. Gipp, Buffalo, $73,300; Bison City Engineering & Contracting Co., Inc., Buffalo, $73,245.

Road No. 1222, Franklin County, 0.22 mile—M. J. Vitilli, Saranac Lake, $3586; Rumpft & Stevens, Lake Placid, $3599; JOHN F. LEWIS, Albany, $3474 (awarded contract); Flood & Van Wirt Co., Hudson Falls, $3682; P. J. Kennedy, Utica, $4155; William H. Murray, Saranac Lake, $3919; S. B. Van Wagonen, Inc., Rondout, $4038.

Road No. 5269-B, Jefferson County, 0.51 mile—John F. Lewis, Albany, $6032; P. J. Kennedy, Utica, $6453; A. J. Rockwood, Rochester, $6092; Phelan & Sullivan, Utica, $6432; Semper Bros., Watertown, $6249; Ward E. Griffin, Massena, $6270; Rumpft & Stevens, Lake Placid, $6499; J. A. WEIDMAN, Syracuse, $5816 (awarded contract).

Road No. 1237, Monroe County, 0.66 mile—Michael H. Ripton, Rochester, $22,762; Fulton Engineering Co., Inc., Albany, $22,891; Ribstine-Holter Construction Co., Inc., Rochester, $22,834; John Petrossi Co., Rochester, $22,951; Monroe Roads Co., Pittsford, $22,395; GREENFIELD CONSTRUCTION CO., Hornell, $22,294 (awarded contract); Connors & Gallivan, Elmira, $22,628.

Road No. 758-A, Niagara County, 8.33 miles—Public Service Contracting Co., Niagara Falls, $38,977; Greenfield Construction Co., Hornell, $39,046; J. A. Culkin, Oswego, $41,717; Harradine Bros. Co., Inc., Spencerport, $38,880; Greece Construction Co., Rochester, $40,427; C. B. Whitmore Co., Lockport, $41,540; AUSTIN W. SUMMERS, Buffalo, $38,767 (awarded contract).

Road No. 909-A, Putnam County, 0.13 mile—John Twinane, Hartsdale, $1848; JAMES GARAFANO & SON, INC., Mt. Vernon, $1733 (awarded contract), James L. Kehoe, Newburgh, $2346; Amos D. Bridge's Sons, Inc., Hazardville, Conn., $2066; H. B. Sproul Construction Co., Inc., Peekskill, $1911.

Road No. 5533, Rensselaer County, 2.11 miles—John Arborio, New Haven, Conn., $29,413; John W. Davitt, Albany, $29,943; Gifford Construction Co., Jamaica, $28,811; Highway Engineering Co., Albany, $29,449; Parker-Hassam Paving Co., Worcester, Mass., $29,799; Murray Contracting Co., Troy, $26,936; BELMAR CONTRACTING CO. INC., Troy, $26,814 (awarded contract).

Road No. 5234, Sullivan County, 8.51 miles—JOHN S. ARMSTRONG, Middletown, $37,127 (awarded contract); H. B. Sproul Contracting Co., Inc., Peekskill, $41,313; John De Michael & Bro., Torrington, Conn., $40,601; John J. Guinan

Contracting Co., Brooklyn, $37,295; Eggleston & Garthwaite, Yonkers, $37,878; Flood & Van Wirt Co., Hudson Falls, $40,605; Ruddy-Saunders Construction Co., Troy, $41,456. Noted Mar. 4.

Ithaca, N. Y.—Bonds for $43,000 were sold Mar. 24, the proceeds of which will be used for improving and constructing highways in Tompkins County.

New York, N. Y.—(Borough of Brooklyn)—(Official)—Bids were received Mar. 24 by L. H. Pounds, Borough Pres., for improving streets as follows: (a) East 17th St., (b) 54th St., (c) West 32d St.: Sicilian Asphalt Paving Co., (a) $4879, (b) $5625, (c) $5095; Cranford Co., (a) $4930, (b) $5561, (c) $9203; Brooklyn Alcatraz Asphalt Co., 407 Hamilton Ave., Brooklyn, (a) $4677, (b) $5067, (c) $8246; Topeka Paving Co., Inc., (a) $5021, (b) $5444, (c) $8878; Uvalde Asphalt Paving Co., (a) $4700, (b) $5457, (c) $8471; Union Paving Co., (a) $6332, (c) $11,617; Barber Asphalt Paving Co., (b) $5777, (c) $9529. Noted Mar. 18.

New York, N. Y.—(Borough of Brooklyn)—(Official)—Bids will be received until 11 a.m., Apr. 7, by L. H. Pounds, Borough Pres., for improving a number of streets.

New York, N. Y.—(Borough of Brooklyn)—(Official)—Bids were received Mar. 24 for 200,000 gal. of tar road surfacing material from: Barrett Mfg. Co., 17 Battery Pl., $10,940; United Gas Improvement Co., $11,860.

✚**New York, N. Y.**—(Borough of Brooklyn)—(Official)—The contract for improving Ave. U from Coney Island to Gravesend Ave. has been awarded to L. GRANATO, at $6287. Noted Mar. 4 and 18.

New York, N. Y.—(Borough of Queens)—(Official)—Bids were received Mar. 24 for 5000 cu.yd. of gravel or chipstone as follows, per cu.yd.: T. F. Tuohy & Co. Inc., $1.59; Charles A. Myers Contracting Co., $1.65; Frederick Starr Contracting Co., $1.47.

New York, N. Y.—(Borough of Queens)—Bids were received Mar. 24 by the Borough President for laying sidewalks on Murray St. from Broadway to Mitchell Ave. and on Bathgate St. from Mitchell Ave. to Bayside Ave. as follows: F. Soviers, $18,452; Peace Bros., $19,717; C. Vanderbilt, $19,139; V. T. Maxwell, $21,487; G. Marshall, $18,805; Astoria Contracting Co., $18,133; Charles A. Myers Contracting Co., $17,905; Ulrich & Co., $18,223; M. F. Hickey, $21,367; M. F. Scott, $18,415; Gifford Contracting Co., $17,759; H. J. Mullen Contracting Co., $17,526.

New York, N. Y.—(Borough Queens)—(Official)—Bids will be received until 11 a.m., Apr. 7, by Maurice E. Connolly, Borough Pres., for improving a number of streets.

New York, N. Y.—(Borough of Richmond)—(Official)—Bids will be received until noon, Apr. 6, by Charles J. McCormack, Borough Pres., for improving the south side of Castleton Ave. from Havenwood Rd. to Brighton Ave.

New York, N. Y.—(Official)—See item under "Water Supply-Irrigation."

Niagara Falls, N. Y.—(Official)—Bids will be received until 7:30 p.m., Apr. 6, by the Board of Public Works, for paving various streets and alleys. F. S. Parkhurst, Jr., is City Engr., and Thomas H. Hogan is City Clk.

✚**Oneonta, N. Y.**—Press reports state that the contract for paving River St. with bituminous macadam has been awarded to PHELAN & SULLIVAN, Utica, N. Y., at $19,551. Noted Mar. 4.

★**Oswego, N. Y.**—(Official)—Bids will be received until 2 p.m., Apr. 9, by the Department of Works for constructing approximately 4000 sq.yd. of vitrified brick pavement and for resurfacing 8500 sq.yd. of old sheet asphalt pavement with vitrified brick.

Rochester, N. Y.—The City Council proposes to pave Norton St. with asphalt or brick at an estimated cost of $75,000.

✚**Troy, N. Y.**—A contract for repaving 7000 sq.yd. of asphalt pavement has been awarded to JOHN W. GAVITT, Troy.

Utica, N. Y.—Bonds for $5469 were sold Mar. 22, the proceeds of which will be used for paving.

Blairstown, N. J.—The Board of Chosen Freeholders of Warren County, Belvidere, will build a new macadam road from Blairstown to the Lackawanna station. Surveys have been made by the County Engineer.

Bloomfield, N. J.—The city plans to pave Waverly Pl. Estimated cost, $25,000. Ernest Baechlin, National Bank Bldg., Bloomfield, is Engr.

Camden, N. J.—The City Council plans the improvement of Broadway from Federal St. to Kaighn Ave. with sheet asphalt. Negotiations are under way with the Public Service Ry. Co. for the installation of belgian block paving between its rails on this thoroughfare.

Camden, N. J.—The City Council has passed an ordinance providing for the improvement of North Second and State St. with sheet asphalt pavement.

Haddonfield, N. J.—The Board of Commissioners plans the improvement of Kings Highway, from Chestnut St to Madison Ave., connecting with the county paving to be done by the Board of Freeholders.

Jersey City, N. J.—Bids will soon be received by the Board of City Commissioners for paving High St. from Baldwin to Summit Ave.

★**Montclair, N. J.**—(Official)—Bids will be received until 8 p.m., Apr. 12, by Harry Trippett, Town Clk., for 50,000 gal. of asphalt for resurfacing streets.

★**Montclair, N. J.**—(Official)—Bids will be received until 8 p.m., Apr. 12, by Harry Trippett, Town Clk., for about 130,000 gal. of asphalt road oil containing 45% asphalt.

Paterson, N. J.—Bids will be received by the county until 2 p.m., Apr. 7, for repairing and macadamizing 31 roads. Plans are at the office of the County Engineer, Court House, Paterson.

Toms River, N. J.—(Official)—Bids will be received until noon, Apr. 6, by the Board of Chosen Freeholders of Ocean County for building a road in Dover Township.

Trenton, N. J.—The Board of Freeholders of Mercer County will soon call for bids for the construction of a new bituminous concrete road from Washington's Crossing to the Hunterdon County line, about four miles. The contract will be let in two sections.

Union, N. J.—(Weehawken post office)—Robert Gaw, Town, Engr., has been authorized to prepare plans for repaving Fifth St. with granite block.

Darby, Penn.—Bids will be received by the Borough Council until Apr. 5 for the sale of $30,000 in bonds, the proceeds to be used for street improvements.

Harrisburg, Penn.—Bids will be received until Apr. 7 by W. H. Lynch, Supt. Streets and Pub. Imp., for constructing an asphalt plant.

✚**McKeesport, Penn.**—The contract for improving Walnut St. from 14th to 16th Ave. has been awarded to F. H. CROZIER at $10,426.

✚★**Philadelphia, Penn.**—The contract for improving the Parkway from 19th to 22nd St. has been awarded to the McNICHOL PAVING & CONSTRUCTION CO., Philadelphia, Penn., at $151,591. Noted Feb. 25 and Mar. 25.

Sharpsburg, Penn.—Bids will be received until 7:30 p.m., Apr. 12, by J. F. Barry, Borough Clk., for grading, paving and curbing various streets.

✚★**Wilkes-Barre, Penn.**—(Official)—Contracts have been awarded for paving Magnolia Ave., Wood, River, Main, Race, Blackman, High and Grove St., to the STATE PAVING CO.; Kidder St. to B. G. COON CONTRACTING CO.; South St., to the HERRICK CONTRACTING CO.; Foster Lane to FRANK ANSTETT. Noted Feb. 11.

✚**Baltimore, Md.**—Contracts have been awarded by the State Road Commissioners for paving as follows: Cathedral St. from Mt. Royal Ave. to Madison St., 0.47 miles, with asphalt, to the AMERICAN PAVING & CONSTRUCTION CO., Montebello Ave., and Jenkins Lane, Baltimore, Md., at $20,753. For roadway, from Cumberland to Nave's Farm, Alleghany, County, to THOMAS, BENNETT & HUNTER, Westminster, Md. at $11,715, consisting of 1.65 miles of resurfacing. For 3.92 miles of concrete roadway on the Annapolis Blvd., from Glen Brunie to Pumphrey, Anne Arundel County, to FISHER & CARROZA, 437 East Preston St., Baltimore, at $43,954. For 0.85 mile of resurfacing, through Grantsville, Garrett County, to FOGEL & CO., at $8476. For 5.66 miles gravel resurfacing, from La Plata to near Ripley, Charles County, to THOMAS MULLAN, 4001 Greenmount Ave., Baltimore at $22,854. For one mile of resurfacing through Hancock, Washington County, to F. J. McGUIRE, at $13,446.

Baltimore, Md.—Bids will be received until Apr. 13, by the Maryland State Road Commissioners, 601 Garrett Bldg., Baltimore, Md., for road construction, under Contract Ab-8, Baltimore City, sections of Maryland Ave., and on Russell, Bush and Ridgely St., 0.83 miles brick, sheet asphalt and granite block; Contract Bc-3A, Baltimore City, Frederick Ave., over Gwynn's Falls Bridge, 0.34 miles vitrified brick paving; Contract o162B, Garrett County, 3.73 miles resurfacing, from Thayerville toward McHenry; Contract CE-18 Cecil County, 1.38 miles concrete or macadam, through Elkton from Little Elk Bridge to first cross-road, and from Pennsylvania crossing to Big Elk bridge.

✚**Pulaski, Va.**—A contract for permanent street improvements has been awarded to the HOTEL CONSTRUCTION CO., Pulaski, Va., at approximately $103,059. Noted Sept. 10, 1914, and Feb. 11, 1915.

Bryson City, N. C.—Bids will be received until Apr. 10 by the Commissioners of Swain County for constructing about 26 miles of road. T. M. Howeston is Engr.

Taylorsville, N. C.—At the election held Mar. 9 the citizens voted in favor of issuing $150,000 in bonds, the proceeds of which will be used for constructing and improving roads. Noted Feb. 18.

✚**Waycross, Ga.**—The contract for paving Carswell Ave. with brick has been awarded to the GEORGIA ENGINEERING CO., Augusta, Ga.

Anniston, Ala.—Bids will be received until 2 p.m., Apr. 7, by the Commissioners of Calhoun County for grading, draining and surfacing the Piedmont and Jacksonville Rd. The estimated cost is $4616.

✚**Birmingham, Ala.**—The contract for paving 10th Ave., S., from 26th to 28th St. has been awarded to the BIRMINGHAM PAVING CO., Birmingham, at $8000.

Ashtabula, Ohio—Bids will be received until Apr. 19 by A. V. Hillyer for improving a portion of Center Rd.

Canal Dover, Ohio—(Official)—Bids will be received until noon, Apr. 14, for paving Iron and Slingluff Ave. George E. Arnold is City Engr.

Cincinnati, Ohio—(Official)—Bids will be received until noon, Apr. 23, by the Board of Commissioners of Hamilton County for improving the Hunt Rd. Albert Reinhardt is Clk. of the Comrs.

Cleveland, Ohio—Bids will be received until 10 a.m., Apr. 17, by the Board of County Commissioners for improving Clague Rd. No. 2 from Lake Rd. in Bay Village to North Ridge Rd. in Dover Township. W. A. Stinchcomb is County Surveyor and E. G. Krause is Clk. of Bd.

Columbus, Ohio—Bids will be received until 2 p.m., Apr. 2, by Clinton Cowan, State Highway Comr., for road improvements in Sandusky, Shelby, Hancock, Huron, Erie, Paulding, Warren, Putnam, Lake, Champaign, Tuscarawas, Montgomery, Defiance and Allen Counties.

✚**Columbus, Ohio**—(Official)—The State Department of Highways awarded contracts as follows: Erie County, Section K, Cleveland-Sandusky Rd., concrete, the BUCKEYE ENGINEERING CO., Norwalk, Ohio, at $64,400; Knox County, Section G, Mt. Vernon-Coshocton Rd., waterbound macadam, the JONES CONSTRUCTION CO., Mt. Vernon, Ohio, at $39,850; Mercer County, Section F, St. Mary's-Ft. Wayne Rd., ISAAC PUTNAM, Van Wert, Ohio, $19,000. Noted Mar. 4.

Conneaut, Ohio—(Official)—Bids will be received until noon, Apr. 10, by S. N. Mahaffey, Dir. Pub. Ser., for improving a section of Grant St.

Defiance, Ohio—Bids will be received until Apr. 5 by Roger Saoust, Clk. of the Bd. of Comr. of Defiance County, for grading and macadamizing Powers Rd. No. 6.

✚Eden, Ohio—Press reports state that a contract for brick paving has been awarded to W. W. HATCH & SONS, Goshen, Ind., at $57,589.

Lorain, Ohio—Press reports state that bids will soon be received for paving West Erie Ave. The estimated cost of the work is $45,000. C. M. Osborne is City Engr.

Nova, Ohio—Bids will be received until noon, Apr. 16, by J. W. Davidson, Clk. of the Bd. of Trustees of Troy Township, for macadamizing the Nova and Eastern and the Nova and Western Rd.

Indianapolis, Ind.—(Official)—Bids will be received until 10 a.m., Apr. 5, by the Board of Public Works for improving Oriental and 36th St. and Good Ave. B. J. T. Jeup is City Engr.

✚Indianapolis, Ind.—The contract for paving East New York St. from Arsenal Ave. to Randolph St. has been awarded to the UNION ASPHALT CONSTRUCTION CO., at $7601.

✚Indianapolis, Ind.—The contract for paving McPherson St. from 30th St. to Sutherland Ave. has been awarded to the REPUBLIC CONSTRUCTION CO.

Beloit, Wis.—(Official)—Bids will be received until 2 p.m., Apr. 8, by the Public Works Committee for improving a number of streets. B. E. Wood is City Clk. and R. R. Caldwell is City Engr.

Brocton, Ill.—(Official)—Bids will be received until 1 p.m., Apr. 12, at the office of the Town Clerk, Brocton, for road construction in Embarass Township, Edgar County.

Christopher, Ill.—(Official)—See item under "Water Supply—Irrigation."

English, Ill.—(Spring Grove post office)—An election will be held Apr. 6 at which the question of issuing $7500 in bonds for paving will be submitted to the voters.

✚Moline, Ill.—The contract for paving in the 15th Ave. District has been awarded to A. E. RUTLEDGE, Rockford, Ill., at $71,127. Other bids were: J. F. McMahon, St. Louis, Mo., $73,141; McCarthy Improvement Co., Davenport, Ill., $73,456; Western Improvement Co., Racine, Wis., $75,814.

Ottawa, Ill.—The Commissioners of La Salle County have appropriated $50,000 for constructing hard roads.

Springfield, Ill.—(Official)—Bids will be received until 11 a.m., Apr. 7, by the State Highway Commission for State-Aid work in Kendall County, Section A, 7300 lin.ft. of concrete, estimated cost, $13,334, and Sangamon County, Section F, 1700 lin.ft. of brick, estimated cost, $5363.

Kaukauna, Wis.—Bids will be received until Apr. 5 by the City Clerk for improving a number of streets.

✚Milwaukee, Wis.—(Official)—The contract for constructing the Beloit Rd. of the Milwaukee County highway system has been awarded to JENSEN & JENSEN, Chamber of Commerce Bldg., Chicago, Ill. Noted Mar. 18.

Milwaukee, Wis.—The Department of Public Works will receive bids until Apr. 6 for road oil of various grades as follows: Bid No. 1, 50,000 gal.; No. 2, 200,000 gal.; No. 3, 50,000 gal.; No. 4, 50,000 gal.

Milwaukee, Wis.—Bids will be received until Apr. 5 for asphalt paving with concrete foundation, and concrete curb, gutter and sidewalks, as follows: On 16th St., 20th Ave., Royall Pl., Greenfield Ave., Harrison Ave., Cleveland Ave., 49th St., and Sixth Ave.

Prairie du Chien, Wis.—(Official)—The date for receiving bids for constructing 9106 sq.yd. of permanent pavement on concrete foundation has been extended from Apr. 14 to Apr. 23. W. G. Kirchoffer, 31 Vroman Blk., Madison, is Engr. Noted Mar. 18.

✚Richland Center, Wis.—A contract for constructing bitulithic pavement has been awarded to the BUTLER CONSTRUCTION CO., Waukesha, Wis., at approximately, $25,905.

✚Burlington, Iowa—A contract for paving has been awarded to ELMER GOCHANOW, Muscatine, Iowa, at approximately $7980.

✚Cedar Rapids, Iowa—Contracts have been awarded for paving as follows: Contract 1, to FORD PAVING CO., Cedar Rapids, at $17,898, for 9762 sq.yd. vitr. brick block on a 4-in. concrete foundation, on 16th and 8th Ave., 11th and 6th St. Contract 2, to FORD PAVING CO., Cedar Rapids, at $91,932, for vitrified brick block on a 6-in. foundation, with asphalt filler, to include 42,400 yd. of paving, 14,000 cu.yd. grading, 100 cu.yd. rock excavation and 100 cu.yd. of loose rock excavation. Contract 3, to WESTERN IMPROVEMENT CO., Racine, Wis., at $39,271, for asphaltic concrete, 2-in. wearing surface, granite chips, 4-in. foundation to include 25,200 sq.yd. paving, 8000 cu.yd. grading, 50 cu.yd. rock excavation and 50 cu.yd. loose rock excavation. Contract 4, to PERCY P. SMITH, Cedar Rapids, for curb and gutter, at $8015 for east side and $1990 for west side.

Clear Lake, Iowa—Press reports state that the City Council will soon receive bids for paving two miles of streets.

Des Moines, Iowa—The City Council contemplates improving a portion of Court Ave. Horace Susong is City Clk.

Duluth, Minn.—The City Council plans to pave Woodland Ave. with concrete, at an estimated cost of $22,890. John Wilson is City Engr.

Duluth, Minn.—(Official)—Bids will be received until 9.30 a.m., Apr. 3, by O. Halden, County Audr., for constructing approximately one mile of the Heino Rd.

Walker, Minn.—(Official)—Bids will be received until 2 p.m., Apr. 16, by C. D. Bacon, County Audr., of Cass County, for constructing state rural highways Nos. 81 and 83 in Cass County.

Ottawa, Kan.—(Official)—Bids will be received until 1 p.m., Apr. 8, by B. W. Harris, City Clk., for improving a portion of Seventh St.

Dundee, Neb.—(Official)—We are advised that the Village Council plans laying 40,000 sq.yd. of asphalt pavement during 1915. King Rohrbough Co., 316 McCague Bldg., Omaha, Neb., is Engr.

Bismarck, N. D.—Bids will be received until 2 p.m., Apr. 7, by T. E. Flaherty, Audr. of Burleigh County, for grading a road around Long Lake.

Jamestown, N. D.—Press reports state that bids will be received until Apr. 5 by the Auditor of Stutsman County for road work. The estimated cost of the work is $8000.

✚Missoula, Mont.—The contract for paving Stevens Ave. with bitulithic has been awarded to J. C. MAGUIRE, Lewistown, at $28,771. Noted Mar. 4.

✚Weston, Mo.—(Official)—A contract for constructing 8000 cu.yd. of bituminous pavement has been awarded to MALEY & KELLEY, Kansas City, Mo. Noted Mar. 25.

Corsicana, Tex.—According to press reports bonds for $75,000 have been sold, the proceeds of which will be used for constructing roads in District No. 3.

Longview, Tex.—At a recent election the citizens voted in favor of issuing $300,000 in bonds, the proceeds of which will be used for constructing roads.

Marshall, Tex.—Bids will be received until 2 p.m., Apr. 6, by the Commissioners Court of Harrison County for constructing approximately 20 miles of graveled and macadam highway in Road District No. 1. N. P. Turner is County Engr.

Port Lavaca, Tex.—An election will be held Apr. 5 to vote on the question of issuing $19,500 in bonds, the proceeds of which will be used for grading and graveling streets.

Post, Tex.—(Official)—We are advised that Garza County will spend $50,000 for the construction of dirt roads this year. Approximately $15,000 will be spent for bridge construction. The work will be done by day labor. J. M. Boren is County Judge.

Witchia Falls, Tex.—(Official)—The City Council contemplates an expenditure of $45,000 for paving. Noted Jan. 28 and Mar. 18.

✚Durant, Okla.—A contract for constructing 17,600 sq.yd. waterbound macadam pavement, 8200 ft. of curb and gutter and 5000 cu.yd. of excavation and embankment has been awarded to AMMONS & BAUM, Durant, Okla., at $22,755.

Clifton, Ariz.—Bids will be received until 10 a.m., Apr. 5, by A. L. Terry, County Clk., for the sale of $150,000 in bonds, the proceeds of which will be used for constructing roads.

Everett, Wash.—Bids will be received until Apr. 5, by M. Weatherbee, County Audr., for grading 4200 lin.ft. of road between the Snoqualmie River and Bancroft and for constructing 8700 lin.ft. of Highway No. 12. Hans Mumm is County Engr.

Everett, Wash.—Bids were received Mar. 15 by the Commissioners of Snohomish County for constructing the Beverly Park Highway as follows: Atlas Construction Co., Everett, $13,716; Bancroft & Morgan, Everett, $16,803; Shepherd & Crossman, Everett, $16,890; Quigg Construction Co., Everett, $27,710; J. B. Snyder, Everett, $27,710. Noted Mar. 4.

✚North Yakima, Wash.—The contract for paving South K St. has been awarded to the CASCADE CONSTRUCTION CO., at $8499.

Portland, Ore.—An election will be held Apr. 14 to vote on the question of issuing $1,250,000 in bonds, the proceeds of which will be used for constructing roads in Multnomah County.

Dunsmuir, Calif.—The city officials are considering the construction of a concrete roadway through the city on the route of the State highway. The estimated cost of the improvement is $25,000. George Malone is Mayor.

East San Diego, Calif.—Bids will be received by Orwell J. Early, City Clk., until 7:30 p.m., Apr. 5, for improving Hugo Ave. and cross streets.

Huntington Park, Calif.—Bids will be received until 5 p.m., Apr. 5, by W. H. Boss, City Clk., for improving Irvington Ave. from Pacific Blvd. to Passaic St.

Indio, Calif.—Press reports state that the City Council will spend about $35,000 for street improvement work.

Livermore, Calif.—At the election held Mar. 16, the citizens voted in favor of issuing $50,000 in bonds, the proceeds of which will be used for paving.

✚Manhattan Beach, Calif.—The contract for improving 15th St. and three alleys has been awarded to the MODERN CONSTRUCTION CO., 1006 Wright & Callender Bldg., Los Angeles, at $14,251.

✚Oroville, Calif.—(Official)—A contract for paving various streets has been awarded to the CLARK & HENERY CONSTRUCTION CO., Stockton, Calif., at $30,974. Other bids were: Federal Construction Co., $31,929; City Street Improvement Co., $35,951 Ransome Crummy Co., $38,600. Noted Mar. 18.

✚Redwood City, Calif.—(Official)—Contracts have been awarded by the Supervisors of San Mateo County for constructing a road from Tunitas to San Gregorio to JAMES WILLIAMSON, Half Moon Bay, Calif., at $24,906 and from Colma to Half Moon Bay Road to the SPRING CONSTRUCTION CO., First National Bank Bldg., Berkeley, Calif., at $36,689. Noted Feb. 18.

San Gabriel, Calif.—W. A. Keep, Alhambra, Calif., at $9467, was the lowest bidder for improving Angelena St.

Ukiah, Calif.—Bids will be received until Apr. 6 by the Board of Supervisors of Mendocino County for constructing Section 2 of the Ten-Mile River Rd. and Section 3 of the Two Rivers and Covelo Rd. Hale McCowen is Clk. of the Bd.

✚Ukiah, Calif.—The Board of Supervisors of Mendocino County has awarded a contract for road and bridge work near Ukiah to SALLINEN & SALLINEN, at $14,990.

Potton Springs, Que.—Bids will be received by J. N. Labell, Potton Springs, until Apr. 6, for paving a number of roads with stone and gravel.

Merritton, Ont.—Bids will be received about May 1 for the construction of macadam roads. The estimated cost is $10,000. Richard Clark is Clk.

INDUSTRIAL WORKS

✚Boston, Mass.—The contract for the construction of a one-story, 80x145-ft. reinforced-concrete addition to the plant of the Sturtevant Mill Co. has been awarded to the B. FRANK CONSTRUCTION CO., 217 Walnut St., Brookline. Estimated cost, $25,000.

✚Clinton, Mass.—The Clinton Wire Cloth Co. has awarded the contract for the construction of a one-story, 58x224-ft. brick factory to the FLINT BUILDING & CONSTRUCTION CO., Palmer. The estimated cost is $30,000. Noted Dec. 3.

✚Millbury, Mass.—G. M. JACQUES, North Main St. Worcester, has been awarded the contract for the construction of a two-story, 68x112-ft. storage building for the H. H. Hakes Mfg. Co.

✚Salem, Mass.—W. H. Gove, 254 Lafayette St., has awarded the contract for the construction of a four-story, 35x213-ft. storage building and factory to J. J. FLYNN & SON, 209 Essex St.

✚Providence, R. I.—The T. Y. CULLINAN CO. has been awarded the contract for the construction of a three-story, 62x105-ft. warehouse for the R. I. Supply & Engineering Co., West Exchange St.

Branford, Conn.—Plans are being prepared by Philip Sellers, Arch., New Haven, for the construction of a 181x210-ft. reinforced-concrete addition to the foundry of the Malleable Iron Fittings Co.

New Haven, Conn.—Plans are being prepared by Brown & Von Beren, Arch., Chamber of Commerce Bldg., for the construction of a two-story, 77x112-ft. concrete bakery at Canal and Gregory St. for Blanchard Bros.

✚Buffalo, N. Y.—The FERGUSON STEEL & IRON CO. has been awarded the contract for the construction of a 100x300-ft. reinforced-concrete manufacturing building at Churchill St. for the Curtiss Aëroplane Co. Estimated cost, $80,000.

Chadwicks, N. Y.—Bids will soon be received for the construction of a two-story, 106x168-ft. addition to the silk mill of the Standard Silk Co. W. Foster is Mgr.

✚Elba, N. Y.—JOHN LENNON SON & CO., Niagara Falls, has been awarded the contract for the construction of a 112x261-ft. plant for the Elba Food Products Co., Inc. The estimated cost is $70,000.

✚New York, N. Y.—(Borough of Brooklyn)—JOHN AUER & SON, 648 Lexington Ave., has been awarded the contract for the construction of a four-story warehouse for Thomas Roulston, 100 Ninth St. Estimated cost, $48,000.

New York, N. Y.—(Borough of Manhattan)—The HELLMANN CONSTRUCTION CO., 160 East 66th St., has been awarded the contract for the construction of a four-story storage building for M. Crump. Estimated cost, $10,000.

✚Oriskany, N. Y.—GRIFFITHS & PIERCE, Utica, has been awarded the contract for the construction of a three-story, 92x147-ft. factory for H. Waterbury & Sons.

Rochester, N. Y.—Bids will soon be received by Foster & Grade, Arch., Sibley Bldg., for the construction of a five-story, 90x210-ft. warehouse for Brewster, Gordon & Co., 47 North Water St. Estimated cost, $130,000. Noted Feb. 4.

Harrisburg, Penn.—Plans are being prepared for the construction of a factory at Tenth and Market St. for M. L. Graupner & Sons. The estimated cost is $100,000.

New Castle, Penn.—The Grasselli Chemical Co. plans to construct an addition to its plant to consist of two buildings, one, 150x350 ft., and the other, 85x180 ft. Estimated cost, $200,000.

Philadelphia, Penn.—Bids will soon be received for the construction of a five-story, 30x150-ft. reinforced-concrete warehouse for Asam Bros. William Steele & Sons Co., 1600 Arch St., is Arch.

Pittsburgh, Penn.—The Carnegie Steel Co., Carnegie Bldg., plans to construct a plant. The estimated cost is $500,000. A. C. Dinky is Pres.

✚Pittsburgh, Penn.—The Ft. Pitt Hotel Co. has awarded the contract for the construction of a warehouse and laundry on Liberty Ave. to the HENRY SHENK CO. Estimated cost, $160,000. Noted Sept. 3.

Pittsburgh, Penn.—(Official)—Work will be started about Apr. 10 for the construction of a seven-story, 60x110-ft. reinforced-concrete warehouse for the P. H. Butler Co., 1205 Liberty Ave. Hunting & Davis, Century Bldg., is Arch. Estimated cost, $85,000.

✚Baltimore, Md.—The Baltimore Plumbing Supply Co. has awarded the contract for the construction of a three-story, 48x75-ft. warehouse at Central and Fairmount Ave. to the FIDELITY CONSTRUCTION CO. The estimated cost is $10,000.

Morgantown, W. Va.—The Greer Limestone Co. plans to construct a limestone crushing plant. The estimated cost is $25,000. H. C. Greer is Pres.

Birmingham, Ala.—Frank A. Dudley and associates contemplate the construction of a plant for the manufacture of cotton goods. The estimated cost is $500,000.

✚Cincinnati, Ohio—The FERRO CONCRETE CONSTRUCTION CO., Richmond and Harriet St., has been awarded the general contract for the construction of a five-story, 43x150-ft. warehouse and a three-story, 105x115-ft. feed mill for Early & Daniel Co. Estimated cost, $90,000. Noted Oct. 29.

✚Cleveland, Ohio—The contract for the construction of a two-story addition to the plant of the Haserot Canneries Co., 413 Huron Rd., has been awarded to the C. W. GRIFFIN CO. Estimated cost, $15,000.

Cleveland, Ohio—Plans are being prepared for the construction of a six-story warehouse at Lakeside Ave. and East 22d St. for Fisher Bros., 1303 West Ninth St. Estimated cost, $150,000.

✚Cleveland, Ohio—The contract for the construction of a factory on East 131st St., for the Elyria Iron & Steel Co., Elyria, has been awarded to the PITT CONSTRUCTION CO. Estimated cost, $75,000. Noted Mar. 4.

✚Cleveland, Ohio—The Lake Erie Smelting & Refining Co., 7800 Bessemer Ave., has awarded the contract for the construction of a metallurgical and refining plant to DUCHON BROS., 6304 Hawthorne Ave. Noted Feb. 18.

Cleveland, Ohio—The Leisy Brewing Co., 3320 Vega Ave., plans to construct a four-story addition to its cold-storage plant, and also a warehouse. The estimated cost is $60,000.

Delaware, Ohio—Bid will soon be received for the construction of a four-story, 60x100-ft. concrete warehouse for the V. T. Hills Co. W. R. Powell, Hippodrome Bldg., Cleveland, is Arch.

Fostoria, Ohio—Plans are being prepared for the construction of plant for the Seneca Wire Mfg. Co. The estimated cost is $20,000.

Toledo, Ohio—Plans have been prepared by M. Stophlet, Arch., 606 Nasby Bldg., for the construction of a seven-story storage warehouse at Speilbusch Ave. and State St. for the Scheiwe Storage Co., 645 Ohio Bldg. Noted Jan. 28.

Youngstown, Ohio—Plans have been prepared for the construction of a four-story reinforced-concrete garage for Pfau & Faunce, 36 Pyatt St. Estimated cost, $50,000.

Chicago, Ill.—Bids will be received until Apr. 7, by Graham, Burnham & Co., Arch., 80 East Jackson Blvd., for the construction of a six-story, 64.6x109.8-ft. factory for John F. Jelke, 759 South Washtenaw Ave.

Chicago, Ill.—Plans are being prepared by J. E. Pridmore, Arch., 38 South Dearborn St., for the construction of a four-story factory for the Martin-Senour Co., Quarry St. Estimated cost, $15,000.

✚Chicago, Ill.—PETER OLSON CO., 19 South La Salle St., has been awarded the general contract for the construction of a five-story, 50x100-ft. storage warehouse for the M. Polsen Express & Van Co., 3414 Sheffield Ave. The estimated cost is $40,000.

New Athens, Ill.—Bids are being received for the construction of a two-story, 60x100-ft. warehouse for the Auto Stove Co. Riester & Rubach, 414 Missouri Ave., East St. Louis, is Arch.

Milwaukee, Wis.—The Northwestern Barrel Co. plans to rebuild its plant which was recently destroyed by fire. Estimated cost, $25,000.

South Kaukauna, Wis.—The Thilmany Pulp & Paper Co., plans to construct a 72x220-ft. addition to its plant. H. L. Seholl is Supt.

Sioux City, Iowa—According to press reports, plans are being prepared for the construction of a concrete addition to the packing plant of R. Hurni, 527 South Chambers St. The estimated cost is $50,000.

Minneapolis, Minn.—The Minnesota Fibre Bottle Co. plans to construct a three-story factory at 65 22d St., N. E. Estimated cost, $30,000.

✚St. Paul, Minn.—The contract for the construction of a three-story, concrete warehouse for the Christian Hanson Realty Co. has been awarded to the PAUL STEENBURG CONSTRUCTION CO. Estimated cost, $60,000.

Topeka, Kan.—Plans are being prepared by L. M. Wood, Arch., for the construction of a three-story, 50x130-ft. factory for Rehkopf Bros., 209 West Sixth Ave. Estimated cost, $15,000.

Lincoln, Neb.—The Lincoln Transfer & Storage Co. contemplates the construction of a 100x120-ft. warehouse at Tenth and U St. The estimated cost is $15,000.

Omaha, Neb.—Bids are being received by G. B. Prinz, Arch., 1033 Omaha National Bank Bldg., for the construction of a three-story, 62x132-ft. warehouse and factory for L. G. Doup, 1301 Nicholas St. Estimated cost, $60,000.

✚Kansas City, Mo.—MOSBY & GOODRICH has been awarded the contract for the construction of a five-story reinforced-concrete building for the Lechtman Printing Co. Estimated cost, $50,000. Noted May 21.

St. Louis, Mo.—Bids are being received by F. C. Bonsack, Arch., 815 Pierce Bldg., for the construction of a one-story, 50x125-ft. warehouse for the Columbia Transfer Co. The estimated cost is $25,000.

Marysvale, Utah—According to press reports, the Armour Packing Co. plans to construct a plant for the manufacture of potash. Estimated cost, $3,000,000. J. Ogden Armour is interested.

Salt Lake City, Utah—It is reported that the Knight Sugar Co. will build a factory, estimated to cost $455,000. E. F. Dyer is interested.

Portland, Ore.—Plans are being prepared by Root & Kerr, Arch., for the construction of a 90x140-ft. warehouse for the Portland Flouring Mills. Estimated cost, $20,000.

✚Armona, Calif.—The Kings County Packing Co. has awarded the contract for the construction of a two-story packing plant to TREWHITT & SHIELDS, Fresno, at $20,300. Noted Mar. 18.

✚East San Pedro, Calif.—The Southern California Fish Co. has awarded the contract to M. CHRISTENSEN, 1238 Pacific Ave., San Pedro, for the construction of a 70x235-ft. packing plant and a 65x150-ft. warehouse. Estimated cost, $25,000. Noted Mar. 4.

FEDERAL GOVERNMENT WORK

Vault—New York, N. Y.—(Borough of Manhattan)—Bids were received Mar. 25 by Oscar Wenderoth, Superv. Arch., Treasury Dept., Washington, D. C., for the construction of a vault in the Appraiser's Warehouse, as follows: C. L. Dooley, Inc., New York (Borough of Brooklyn), $19,990; Concord Construction Co., New York (Borough of Brooklyn), $13,717; York Safe & Lock Co., York, Penn., $16,544; Neptune B. Smyth, New York, $16,421; Howard H. Peterson Co., New York, $15,800; Charles Meads & Co., New York, $14,420; C. H. & R. C. Peckworth, New York, $14,685; R. H. Casey, New York, $18,577; North Eastern Construction Co., New York, $13,998.

✚Steel Tanks—New York, N. Y.—The contract for furnishing at the manufacturers' plant, 20 steel tanks has been awarded to ROBERT S. HALL, Warren, Penn., at $6520. Noted Mar. 18.

★Storehouses and Boat Shed—New York, N. Y.—Bids will be received until noon, Apr. 26, by Col. W. M. Black, Army Bldg., 39 Whitehall St., for constructing storehouses and a boat shed on Mill Rock at Hell Gate in East River.

Building—Philadelphia, Penn.—Bids will be received un 2 p.m., Apr. 12, by the Commanding Officer, Frankford Arsenal, for the construction of two one-story brick and reinforced-concrete buildings, for one lumber shed extension and for one double action press shop extension.

★**Stone and Riprap**—Philadelphia, Penn.—The following are the bids for furnishing and depositing 1000 tons of broken stone and 2100 tons of riprap at the Brandywine Shoal Light Station, Delaware Bay: Coast & Lakes Contracting Corporation, New York, $8959; C. R. Simpson, New York, $11,253; Interstate Construction Co., New York, $12,586. Noted Feb. 25.

Coal-Handling Plant—Philadelphia, Penn.—Bids were received for installing a coal- and ash-handling plant in the Mint Bldg., Philadelphia, as follows: Arthur G. McKee, Cleveland, Ohio, $13,150; Guarantee Construction Co., New York, $13,380; Link-Belt Co., Philadelphia, $12,770; R. H. Beaumont Co., Philadelphia, $14,170; Deverell Spencer & Co., Baltimore, Md., $10,840.

Post Office—Smyrna, Del.—Bids were received for the construction of a post office at Smyrna, (a) using limestone except where granite is specified, (b) using sandstone except where granite is specified as follows: James A. Hirons, Dover, Del., (a) $29,325, (b) $29,325; A. H. Jones, Wilmington, Del., (a) $27,776, (b) $27,876; Daniel J. McNamee, Philadelphia, Penn., (a) $28,477; W. E. Mooney, Washington, D. C., (a) $32,779, (b) $32,779; Olin Gerlach, Frostburg, Md., (a) $30,640, (b) $30,750; William H. Fissell & Co., New York, (a) $29,400, (b) $29,900; Potters' Lumber Co., East Liverpool, Ohio, (a) $25,832, (b) $26,000; Thomas W. Cissell, Wooster, Ohio, (a) $33,000, (b) $33,250; J. S. Rogers Co., Moorestown, N. J., (a) $33,900, (b) $34,030; Conners Bros. Co., New York, (a) $29,964, (b) $30,200. Noted Feb. 8.

Storehouse—Wilmington, Del.—Bids will be received until Apr. 7 by Maj. E. N. Johnston, Wilmington, for the construction of a storehouse.

Buildings—Indianhead, Md.—Bids will be received until 11 a.m., Apr. 17, by H. R. Stanford, Chief, Bureau of Yards and Docks, Navy Dept., Washington, D. C., for the construction of two cotton storehouses.

✚**Grading**—Washington, D. C.—The contract for grading about 30,000 cu.yd. in the District of Columbia has been awarded to WARREN F. BRENIZER CO., Washington, D. C., at 22c. per cu.yd. Noted Mar. 11 and 18.

Broken Stone and Trap Rock—Washington, D. C.—Bids will be received until 2 p.m., Apr. 5, by the District Commissioners for furnishing and delivering broken stone and for quarrying and crushing trap rock. Oliver P. Newman, District Bldg., is one of the Comrs.

★**Service Boat**—Wheeling, Va.—Bids will be received until 11 a.m., Apr. 29, by Maj. T. H. Jackson, U. S. Engineer Office, for furnishing and delivering one service boat designated No. 10A3.

Building—Wilmington, N. C.—Bids will be received until 3 p.m., Apr. 19, by Oscar Wenderoth, Superv. Arch., Treasury Dept., Washington, D. C., for the construction of a two-story frame building at the marine hospital.

Dredging—Charleston, S. C.—The following are the bids received for dredging in Ashley River: Globe Dredging Co., Savannah, Ga., $10,340; Atlantic, Gulf & Pacific Co., New York, N. Y., $9009; Ely Dredging & Construction Co., Savannah, Ga., $9570; Simons-Mayrant Co., Charleston, S. C., $6737. Noted Feb. 18.

★**Coal**—New Orleans, La.—Bids will be received until 11 a.m., May 3, by Maj. Edward H. Schulz, Custom House, for furnishing coal for the U. S. plant from July 1 to June 30, 1916.

Dam Construction—Marietta, Ohio—Bids will be received until 10 a.m., Apr. 26, by Lieut. Col. H. Jervey, Dist. Engr. Office, Custom House, Cincinnati, Ohio, for reconstructing, in concrete, the top of Dam No. 4, Muskingum River, at Devols Station, on the Baltimore & Ohio Ry., about 5¾ miles north of Marietta.

✚**Fir Timber**—Michigan—The contract for furnishing fir timber for river and harbor work at Ontonagon, Grand Marais and Keeweenaw Point, has been awarded to the WOODRUFF LUMBER CO., Duluth, Minn., at $6215. Noted Mar. 18.

Repairing Post Office and Court House—Des Moines, Iowa—Bids have been received for alterations in the post office at Des Moines, as follows: James Maine & Sons Co., $53,975; Newport Contracting & Engineering Co., Newport News, Va., $36,628; Grohne Contracting Co., Joliet, Ill., $32,400; Charles Wertz Sons, $35,750; Benson & Marxer, $39,975; Frank M. Weakley, Canton, Ohio, $40,914; Arthur H. Neumann, $37,524; Frank H. Latimer & Co., Kansas City, Mo., $36,688; J. E. Tusant & Son, $43,150; J. C. Mardes Co., $36,900; William Knudson & Son, $37,350. Above bidders are of Des Moines unless otherwise specified. Noted Feb. 18.

Buildings, Etc.—Choctaw, Okla.—Bids will be received until 2 p.m., Apr. 28, by Cato Sells, Comr., Dept. of the Interior, Office of Indian Affairs, Washington, D. C., for the construction of a frame hospital, quarters, laundry, lavatory, power house, camp quarters, water and sewer systems and electric-lighting plant.

✚**Post Office**—Lawton, Okla.—The contract for the construction of a post office at Lawton has been awarded to R. S. MOORE, Lafayette, Ind., at $128,242. Noted Jan. 7 and Mar. 18.

✚✚**Excavation, Etc.**—Payson City, Utah—The following are the bids received for construction, involving excavation, concrete work, etc., in connection with Division 6, High Line Canal, Strawberry Valley Project. SPANISH FORK GRADING CO., Spanish Fork, Utah, $22,196 (awarded contract); Ryberg Bros., Logan, Utah, $22,615; Lewis J. Whitney, Springville, Utah, $22,795; Heuser & Sim, Salt Lake City, Utah, $24,358; O. L. Hedenberg, William F. Olsen, and A. T. Gee, Provo, Utah, $24,378; Wasatch Grading Co., Salt Lake City, Utah, $24,797; H. G. Gilkerson, Salt Lake City, $25,431; Messmer & Rice, Los Angeles, Calif. $28,082. Noted Feb. 18.

Buildings—Tucson, Ariz.—The following are the bids received for the construction of three combination adobe school buildings at Indian Oasis, Ventana and Comobabi Indian villages: F. J. Odermatt Co., Tucson, Ariz., $14,126 for each building; J. W. Tucker, Phœnix, Ariz., total, $32,500; W. D. Lovell, Minneapolis, Minn., $41,500; C. H. Odam, Phœnix, Ariz., $22,100; Chute & Heller, Tucson, Ariz., $14,000 for each building. Noted Mar. 4.

★**Pumping Plant**—Seattle, Wash.—The following are the bids received for furnishing a pumping plant for the Lake Washington Canal Locks: R. D. Wood & Co., Philadelphia, Penn., $29,076; Hans Pederson, Seattle, Wash., $31,774; United Iron Works, Oakland, Calif., $35,506; Allis-Chalmers Mfg. Co., Milwaukee, Wis., $35,697; Charles C. Moore & Co., San Francisco, Calif., $39,609; Seattle Construction & Dry Dock Co., Seattle, $43,517. Noted Feb. 11.

Post Office—Pendleton, Ore.—Bids were received for the construction of a post office at Pendleton, (a) using limestone except where granite is specified, (b) using sandstone except where granite is specified, as follows: Alloway & George, Spokane, Wash., (a) $108,369, (b) $108,269; King Lumber Co., Charlottesville, Va., (a) $104,000, (b) $104,000; Dieter & Wenzel Construction Co., Wichita, Kan., (a) $97,983; J. B. Sweatt, Spokane, Wash., (a) $106,337, (b) $106,300; Welch Bros. & Hanneman, Grass Valley, Calif., (a) $92,219, (b) $92,219; Palmberg & Mattson, Astoria, Ore., (a) $99,870, (b) $99,870; Erickson & Larson, Seattle, Wash., (a) $95,226, (b) $95,042; George A. Whitmeyer & Sons, Ogden, Utah, (a) $105,624; Eugene Schuler, Pasadena, Calif., (a) $120,000, (b) $120,000; Olsen & Johnson Co., Missoula, Mont., (a) $87,445, (b) $87,620; Sound Construction & Engineering Co., Seattle, Wash., (a) $92,362, (b) $87,620; John Almeter, Portland, Ore., (a) $92,548, (b) $92,520; Booker, Kiehl & Whipple, Seattle, Wash., (a) $121,422, (b) $121,422; James E. Winters, Portland, Ore., (a) $84,487, (b) $84,387. Noted Jan. 21.

✚**Foundations**—Pearl Harbor, Hawaii—The concrete foundation for three 600-ft. steel radio towers at Pearl Harbor, will be constructed by the SPAULDING CONSTRUCTION CO., Rialto Bldg., San Francisco, Calif., at $8187. Noted Mar. 4.

MISCELLANEOUS

Seawall—Scituate, Mass.—Bids will be received until Apr. 8 by the State Harbor and Land Commission, Boston, for the construction of a concrete seawall between the first and second cliffs at Scituate. William F. Williams is Ch. Engr.

Channel Construction—Waterbury, Conn.—Bids will be received until 8 p.m., Apr. 14, by William H. Moher, City Clk., for the construction of a 300-ft. masonry channel for Great Brook, seven ft. deep and ten ft. wide, having a reinforced-concrete slab top. Robert A. Cairns, 7 Leavenworth St., is City Engr.

★**Barn and Vegetable Cellar**—Bath, N. Y.—(Official)—Bids will be received until 11 a.m., Apr. 12, by Hon. Joseph A. Goulden, Pres., Bd. of Mgrs., N. Y. State Soldier's and Sailor's Home, Bath, N. Y., for the construction of a barn and vegetable cellar.

Retaining Wall—Buffalo, N. Y.—The Board of Aldermen has ordered a bond issue of $320,000 for the construction of retaining walls along Bird Island pier and from Georgia to Jersey St.

Guard Walls— New York, N. Y.—(Official)—See item under "Water Supply-Irrigation."

Motor Trucks—New York, N. Y.—(Borough of Manhattan)—(Official)—The following bids were received for furnishing nine 1½-ton motor trucks complete to the Department of Water Supply, Gas and Electricity: Poertner Motor Car Co., 1759 Broadway, New York, $14,265; Monohan Express Co., $15,615; Croce Auto Co., $15,782; Apto Car Sales Co., $15,810; John E. Lloyd, $15,975; Reo Motor Car Co., $16,644; John W. Boyle, $17,586; White Co., $25,875. Noted Mar. 18.

Subway—New York, N. Y.—(Borough of Manhattan)—(Official)—Bids will be received until 12:15 p.m., Apr. 9, by the Public Service Commission, 154 Nassau St., for the construction of Section 4, Routes Nos. 4 and 36, a part of the Broadway-Fourth Ave. Rapid Transit R.R.

Subway—New York, N. Y.—(Borough of Brooklyn)—(Official)—Bids will be received until 12:15 p.m., Apr. 20, by the Public Service Commission, 154 Nassau St., for the construction of Section No. 2 of Route No. 12, a part of the Eastern Parkway Rapid Transit R.R.

Steel Grandstands—New York, N. Y.—(Borough of Queens)—Press reports state that the West Side Tennis Club, Forest Hills, will erect steel grandstands around the championship courts.

Broken Stone and Screenings—New York, N. Y.—(Borough of Queens)—(Official)—The following bids were received, Mar. 24, by the Bureau of Highways for furnishing 25,000 cu.yd. of broken stone and screenings: New York Trap Rock Co., 17 Battery Pl., New York, $1.795 per cu.yd.; Charles A. Meyers Contracting Co., $1.89; Frederick Starr Contracting Co., $1.979; Borough Asphalt Co., $1.98; Peace Bros., $2.10; H. J. Mullen Contracting Co., $2.40

Pier—Sag Harbor, N. Y.—Press reports state that the E. W. Bliss Co., Brooklyn, N. Y., is negotiating with the Long Island R.R. for a lease of waterfront at either Main or Division St. for a site for the construction of a pier with an assembling shed and machine shop. The company maintains a proving and experimental station at this point for trials of Whitehead and Bliss-Leavitt torpedoes.

Fire and Police Alarm Systems—Troy, N. Y.—The city plans to install new fire and police signal systems as soon as the proper type can be decided upon. Several companies will be asked to give demonstrations. The estimated cost including central station is $100,000.

✚✚**Excavator**—Atlantic City, N. J.—The contract for furnishing a drag line or slack line excavator, capacity 800 cu.yd. per day, for use at the Doughty Pond, has been awarded to the INSLEY MFG. CO., Philadelphia, Penn., at $20,500. Noted Feb. 25.

Motor Fire Apparatus—Camden, N. J.—Press reports state that the Finance Committee has recommended the bond issue of $100,000 for the purchase of motor fire apparatus. Noted Jan. 21 and Feb. 4.

★**Boardwalk Repairs and Beach Protection**—Cape May, N. J.—The four lowest bids received Mar. 11 for constructing additional boardwalks, bulkheads and beach protection were as follows: Atlantic Construction Supply Co., Atlantic City, $55,489; Cantrell Construction Co., Camden, $55,505; Pugh & Hubbard, $58,309; C. R. Simpson, Huntington, Penn., $58,840. L. E. Miller, Jr., is City Engr. Noted Mar. 18.

✚**Dike and Sluice Gates**—Elizabeth, N. J.—The Union County Mosquito Extermination Commission has awarded the contract for the construction of about one mile of dike in the Elizabeth meadows to the UNITED STATES DRAINAGE & IRRIGATION CO., 17 Battery Pl., New York.

Police Apparatus—Jersey City, N. J.—(Official)—Bids will be received until 2 p.m., Apr. 8 by the Board of Commissioners of Jersey City for automobile patrol wagons for the police department. M. I. Fagen is City Clk.

Motor Fire Apparatus—Jersey City, N. J.—(Official)—Bids will be received until 2 p.m., Apr. 8, by the Board of Commissioners for five or more gasoline tractors for the fire department. M. I. Fagen is City Clk.

Comfort Station—North Bergen, N. J.—(Official)—Bids will be received until 2 p.m., Apr. 6, by the Board of Hudson County Park Commissioners, No. 1 Exchange Pl., Jersey City, for constructing a shelter and public comfort station at North Hudson Park, North Bergen, N. J.

Conduit—Wilkes-Barre, Penn.—The lowest bid received for the installation of underground conduit for police and fire alarm systems was that of the Star Electric Co., at $21,328.

Levee—Augusta, Ga.—Plans are being prepared by Nisbit Wingfield, City Engr., for the construction of a section of levee, about seven miles, between the Charleston & West Carolina Ry. and Sand Bar Ferry. Noted Mar. 18.

✚**Drainage**—Davenport, Fla.—The Davenport Drainage District has awarded the contract for the construction of 7½ miles of 14- to 22-ft. main canal to W. B. WILLIAMS, Ovieda, Fla. In connection with the same work bids will be received at a later date for the construction of 35 miles of laterals. The total estimated cost is $65,000.

Wharves—Jacksonville, Fla.—The lowest bid received by the Board of Port Commissioners for the construction of timber marginal wharves at the Municipal Terminal was that of W. E. Parker, Tampa, at $13,177. Noted Mar. 18.

Drainage—Kissimmee, Fla.—The Taft Drainage District, J. D. Clark, Pres., will construct three main canals and 10 laterals for draining 45,000 acres in the southern part of Orange County. The estimated cost is $80,000. R. H. Ludlam, Kissimmee, is Ch. Engr.

Drainage—Jennings, La.—Bids will be received until Apr. 7 by Charles E. Elber, Secy., Grand Marais Sub-Drainage District A, for dredging about 25 miles of main canals and laterals. Frank Shutts is Engr.

Pumping Station Additions—New Orleans, La.—The Sewerage & Water Board is receiving bids for the construction of additions to Drainage Pumping Station No. 2. Specifications on application to F. S. Shields, Secy.

Wharf—New Orleans, La.—The Port Commissioners, New Orleans Court Bldg., will receive bids until Apr. 7 for the construction of a pile and timber wharf on the east bank of the Mississippi River between Soniat and Bellecastle St. Ford Bacon & Davis, 921 Canal St. is Engr.

Drainage—Union City, Tenn.—Bids will be received until Apr. 12 by J. A. Coble, Secy., Obion River Drainage District, for the construction of about 1,600,000 cu-yd. of levee work with floating dredge; about 631,700 cu.yd. of ditch work with floating dredge; three reinforced-concrete sluiceways; also clearing 500 acres of right of way.

✚**Ditch**—Booneville, Ind.—The contract for the construction of the Homer E. Totten ditch has been awarded to JOHN H. BLAIR, at $24,250.

Dock and Comfort Station—Detroit, Mich.—The annual budget includes appropriations of $33,500 and $20,000 for the construction of a dock at the foot of West St. and a comfort station in Capitol Park.

✚**Drainage**—Hart, Mich.—The Commissioners of Oceana and Newaygo Counties have awarded the contract for drainage work in Leavitt and Beaver townships to the BEACH MFG. CO., at $13,000.

✚**Ditch**—Grand Rapids, Wis.—The Woods County Drainage District Commissioners have awarded the contract for the construction of 17½ miles of ditches to GILMORE BROS., Toledo, Ohio, at 6.94c. per cu.yd.

Levee and Retaining Wall—Muscatine, Iowa—The City Council and the Levee Commission plan to construct a paved sloping levee with a retaining wall. The estimated cost is $15,000. C. H. Young is City Engr.

✚**Ditch**—Olivia, Minn.—The contract for the construction of County Ditch No. 57 has been awarded to KIRCHNER BROS., St. Paul, at $13,990. Noted Mar. 11.

✚**Ditch**—Owatonna, Minn.—The contract for the construction of Judicial Ditch No. 2 has been awarded to the CLARK CONSTRUCTION CO., Clinton, Iowa. The work calls for about 250,000 cu.yd. of excavation. George A. Ralph, St. Paul, is Engr. Noted Mar. 4.

Park Work—Mitchell, S. D.—The Park Board has engaged A. R. Nichols, Landscape, Arch., Minneapolis, Minn., to prepare plans for the contemplated park and boulevard system.

Stock Yards Improvements—Kansas City, Mo.—The Kansas City Stock Yards Co., Kansas City, Mo., plans to extend, improve and rebuild its yards in this city. The estimated cost is $2,500,000.

✚**Drainage**—Osceola, Ark.—The Commissioners of Drainage District No. 9, Mississippi County, have awarded the contract to CATCHINGS & CO., Roseland, Ark., at 18.05c. per cu.yd. for 6700 cu.yd. of levee embankment and at 23.15c. per cu.yd. for 9000 cu.yd. of excavation. The work is located about 13 miles Southwest of Blytheville. The Morgan Engineering Co., Memphis, Tenn., is Engr. Noted Mar. 18.

✚**Wharves**—Beaumont, Tex.—The contract for the construction of 1000 ft. of concrete wharves for the Magnolia Petroleum Co. has been awarded to SPENCE & HOWE, Port Arthur, Tex. The estimated cost is $100,000. Noted Mar. 25.

Drainage—Cordele, Tex.—Press reports state that a contract will be awarded about June 10 for the construction of about 80 miles of ditches, involving 268,000 cu.yd. of excavation. Plans have already been prepared but the drainage commissioners have not been appointed. The estimated cost is $45,000. W. C. Youngs, Edna, Tex., is Engr. Noted Mar. 11.

Drainage—Roswell, N. M.—Plans and specifications have been prepared and work will begin as soon as bonds are authorized and issued for draining 54,000 acres in Chauves County. In November the county was divided into four drainage districts. H. W. Vaushelet is Engr. Noted Nov. 26.

Drainage District—Corinne, Utah—The Corinne Drainage District has been created and plans will soon be prepared for draining and reclaiming about 10,000 acres of land. W. M. Bostaph, Ogden, is Ch. Engr.

Retaining Wall—Salt Lake City, Utah—(Official)—Bids will be received until Apr. 6 by the Board of Commissioners for the construction of a reinforced-concrete retaining wall at Third S. and 11th E. St. Plans are on file at the office of the city engineer.

Seawall—Seattle, Wash.—According to press reports plans have been approved for the construction of a seawall along Railroad Ave. The estimated cost is $150,000.

Waterway—Tacoma, Wash.—Press reports state that the construction of the Hylebos Creek waterway is being delayed by friendly litigation designed to establish the rights of the commissioners to do certain work. The lines of the waterway have been established and surveys completed. L. A. Nicholson is Engr.

✚**Dredge Equipment**—Portland, Ore.—The Port of Portland Commission has awarded the contract for the installation of two boilers in the dredge Columbia to the BALLIN WATER TUBE BOILER CO., at $26,875.

✚**Dock**—Portland, Ore.—The contract for the construction of a 40-ft. uncovered dock in connection with West Side dock No. 1 has been awarded to the BRAYTON ENGINEERING CO., at $17,575.

Levee District—Colusa, Calif.—A bill has been introduced in the state legislature requesting the creation of a levee district in Colusa and Yolo Counties for protecting 129,000 acres from the overflow of the Sacramento River. The frontage to be protected is about 62 miles.

✚**Dredging**—Los Angeles, Calif.—The contract for dredging areas A, B, C and D, Los Angeles Harbor, has been awarded to S. G. HINDES, San Francisco, at $128,658. Noted Jan. 14.

Salt Water Fire Protection System—Oakland, Calif.—Plans have been prepared for additions to the auxiliary salt water fire protection system to cost $30,000. Frank M. Smith is City Clk.

Pleasure Pier—Redondo, Calif.—At an election held Mar. 11 the citizens voted favorably on the proposition to issue $121,000 in bonds for the erection of a municipal pleasure pier. Noted Feb. 25.

Drainage—Greenfield, Ont.—Bids will be received until Apr. 10 by J. D. Cameron, Township Clk., for the construction of the River Baudette drain. This work will require about 56,000 cu.yd. of excavation. Magwood & Stidwell, Cornwall, is Engr.

BUILDINGS

Other items relative to Building Construction will be found under the following headings: "Industrial Works;" "Federal Government Work" and "Miscellaneous."

Claremont, N. H.—Plans are being prepared by Brainerd & Leeds, Arch., 89 Franklin St., Boston, Mass., for the construction of the two-story Spaulding High School. Estimated cost, $65,000.

Allston, Mass.—Plans are being prepared by A. J. Carpenter, Jr., Arch., 39 Dunreath St., Boston, for the construction of a seven-story, 200x200-ft. building for the students of the New England Conservatory of Music, 1316 Beacon St., Brookline. Estimated cost, $800,000. R. M. Floyd is Chn.

Amherst, Mass.—An appropriation of $90,000 has been made by the School Board for the construction of a high school. Herbert S. Carruth, George B. Churchill and Cady R. Elder are members of Bldg. Comn.

✚**Boston, Mass.**—The contract for the construction of the Boston Industrial School for Boys has been awarded to WHITON HAYNES, at $272,000 (item 1), and $271,000 (item 2). Richard A. Lynch is Supt. of Pub. Bldgs.

Boston, Mass.—Work will be started about May 1 on the construction of a theater at Washington St. and Hamilton Pl. to be under the management of Loew's Boston Theaters, Inc. The estimated cost is $400,000.

Boston, Mass.—Plans have been prepared by G. Henri Desmond, Arch., 15 Beacon St., for the construction of a theater at Hyde Sq., West Roxbury District. The estimated cost is $100,000.

Boston, Mass.—John Craig of the Craig Players plans to construct a $500,000 theater at Boylston and Ipswich St. G. Henri Desmond, 15 Beacon St., is Arch.

Boston, Mass.—The School Committee contemplates the construction of a police and school administration building on the site of the Probate Court Bldg. Estimated cost, $150,000.

Cambridge, Mass.—Plans have been prepared by Edward T. P. Graham, Arch., for the construction of a group of buildings for the Cambridge City Hospital on Cambridge St. in the Dana Hill Section. The group includes a main building, a "U" shaped building and power house.

Chicopee, Mass.—George E. Haynes, Arch., Pittsfield, has been retained by the Board of Education to prepare plans for the construction of an addition to the high school. The estimated cost is $75,000.

Lawrence, Mass.—Construction will soon begin on the grammar school at Haverhill and Oak St. The estimated cost is $250,000. James E. Allen, 283 Essex St., is Arch. Noted Feb. 4.

Lynn, Mass.—Harry Hunt is interested in the construction of a seven-story hotel on Mt. Vernon St. The estimated cost is $250,000.

New Bedford, Mass.—Plans are being prepared by the J. M. & C. J. Buckley Co., 164 Federal St., Boston, and the J. W. Bishop Co., 683 Atlantic Ave., Boston, for the construction of a motion picture theater for Gordon & Shoolman. The estimated cost is $150,000.

+Salem, Mass.—Press reports state that the contract for the construction of a Masonic Temple has been awarded to GEORGE BAKER LONG, State Mutual Bldg. Estimated cost, $150,000. Noted Oct. 29 and Feb. 4.

Southbridge, Mass.—Plans have been prepared by Peabody & Stearns, Arch., 53 State St., Boston, Mass., for the construction of a high school. Noted Oct. 29.

Swampscott, Mass.—The School Board plans to remodel the high school at Swampscott. Estimated cost, $47,000. Daniel F. Knowlton is interested.

Watertown, Mass.—Plans are being prepared for the construction of a school on Arlington St. The estimated cost is $73,000.

+Webster, Mass.—The contract for the construction of a one-story, 55x120-ft. motion picture theater for H. J. Steinberg, Old South Bldg., Boston, has been awarded to the TORRINGTON BUILDING CO., 197 Water St., Torrington, Conn. Estimated cost, $40,000.

Worcester, Mass.—Plans are being prepared by O. E. Naul, Arch., 8 Wall St., for the construction of a 12-room school on Orange St. for the Notre Dame Parish.

Wallum Lake, R. I.—The Legislature is considering a bill providing for the construction of the Rhode Island State Tuberculosis Hospital. The Board of Control and Supply will be in charge of the work.

Woonsocket, R. I.—The B. P. O. E. contemplates the construction of a club building on Main St. Estimated cost, $70,000.

+Bristol, Conn.—(Official)—The general contract for the construction of a fireproof graded school on Maple St. for District No. 1 has been awarded to WISE & UPSON, Hartford, at $62,835. Noted Jan. 21, Mar. 4 and 25.

Hartford, Conn.—Plans are being prepared by Russell F. Barker, Arch., 43 Ann St., for the construction of a two-story, 70x380-ft. municipal market.

Albany, N. Y.—Bids will soon be received for remodeling the State House into a Court House. The estimated cost is $100,000. Lewis F. Pilcher, Capitol, is State Arch.

+Buffalo, N. Y.—The contract for the construction of a two-story, 54x137-ft. building at Seventh and Maryland St. for the Holy Cross Church has been awarded to JOSEPH G. BELLANCES. Estimated cost, $40,000.

+Newark, N. Y.—(Official)—O. E. SCHUMAN, Newark, at $43,516, has been awarded the contract for the construction of cottages at the New York State Custodial Asylum for Feeble-Minded Women. Ethan A. Nevin is Supt. Noted Mar. 25.

+Newark, N. Y.—(Official)—The contract for the construction of a building at the New York State Custodial Asylum for Feeble-Minded Women has been awarded to AUSTIN W. SUMMERS, Buffalo, at $40,498. Ethan A. Nevin is Supt. Noted Feb. 11 and Mar. 25.

New York, N. Y.—(Borough of Manhattan)—Bids will be received about Apr. 10 for the construction of a ten-story, 100x100-ft. Y. W. C. A. building. Henry C. Meyer, Jr., 101 Park Ave., is Mech. Engr. Noted Mar. 18.

New York, N. Y.—(Borough of Manhattan)—The Campaign Executive Committee of the Newsboys Home Club, 11th St. and Second Ave., plans to construct a $250,000 building. William Shillaber, Jr., is Temporary Chn. and Emil M. Scholz is Secy.

Schenectady, N. Y.—Plans are being prepared for the construction of a Masonic Temple on State St. The estimated cost is $150,000.

Utica, N. Y.—Plans are being prepared by E. A. Howard, Arch., Bastable Blk., Syracuse, for the construction of a theater for the Alhambra Amusement Co. Estimated cost, $75,000. H. Lux, Alhambra Theater, is interested.

INTERCEPTING SEWER, NEWARK, N. J.

Bids were received Feb. 9 by the Passaic Valley Sewerage Commissioners for constructing Section 8, northerly portion, of the Main Intercepting Sewer from (A) Dock Contractor Co., Hoboken, N. J.; (B) Mason & Hanger Co., New York, N. Y.; (C) Booth & Flinn, Ltd., New York, N. Y.; (D) Charles A. Haskin, Boston, Mass.; (E) Arthur McMullen, New York, N. Y.; (F) Oscar Daniels Co., New York, N. Y.; (G) Newark Paving Co., Newark, N. J., (H) Culp Co., Inc., Paterson, N. J.; (I) New York & New Jersey Construction Co., Newark, N. J. The item bids were as follows:

Tunnel Method	A	B	C	D	E	F
3292 lin.ft. excavation in earth, rock or earth and rock, in compressed air tunnel, for 135-in. sewer	$82.78	$80.00	$79.50	$79.00	$72.50	$70.00
6600 cu.yd. concrete masonry in compressed air tunnel and shafts	11.00	12.00	10.00	10.00	12.00	10.00
100 cu.yd. brick masonry in shafts and manholes	20.00	16.00	18.00	20.00	20.00	10.00
12,000 lb. steel for concrete reinforcement	0.05	0.05	0.05	0.04	0.04	0.03
Extended totals	$347,712	$344,760	$330,114	$328,548	$320,350	$297,800
Open Trench Method	B	E	F	G	H	I
1555 lin.ft. earth excavation in trench for 132-in. sewer	$50.00	$75.00	$61.00	$68.00	$88.22	$72.00
1737 lin.ft. earth excavation in trench for 126-in. sewer	50.00	70.00	60.00	68.00	88.22	60.00
500 cu.yd. rock excavation in trench	4.00	4.00	2.00	0.01	0.01	3.00
8500 cu.yd. concrete masonry	8.00	9.00	8.00	8.00	0.01	8.00
100 cu.yd. brick masonry	16.00	20.00	2.00	20.00	0.01	20.00
12,000 lb. steel for concrete reinforcement	0.04	0.04	0.03	0.03	0.05	0.04
Extended totals	$236,680	$319,195	$269,635	$294,221	$291,111	$288,160

Atlantic City, N. J.—Plans have been prepared for the construction of a six-story addition to the Hotel Strand, Pennsylvania and Beach Ave. The estimated cost is $200,000. George Allen is Owner and Howard Edwards is Mgr.

Jersey City, N. J.—Bids will soon be received by the Jersey City Commissioners for the construction of a city hospital, nurses' home and police and fire headquarters. Noted Mar. 25.

Millville, N. J.—Bids will soon be received for the construction of a 120x166-ft. school. The estimated cost is $70,000. Arnold H. Moss is Arch. Noted June 4, July 30 and Sept. 10.

+Newark, N. J.—The contract for the construction of a seven-story theater and office building for F. F. Proctor, 1564 Broadway, New York, N. Y., has been awarded to FRED T. LEY & CO., 30 East 42d St., New York. Estimated cost, $300,000.

Newark, N. J.—The Strand Theater Corporation, 1579 Broadway, New York, N. Y., plans to construct a $150,000 theater. Thomas W. Lamb, 644 Eighth Ave., New York, and William E. Lehman, 738 Broad St., Newark, are Associate Archs.

Paterson, N. J.—Bids will soon be received for the construction of Public School No. 21. The estimated cost is $125,000. M. T. Anderson, City Hall, is Pres. Bd. of Education and W. T. Fanning, Colt Bldg., is Arch. Noted Oct. 1 and Jan. 14.

Paterson, N. J.—The Trustees of St. Josephs Hospital plan to construct an addition to cost about $50,000.

Perth Amboy, N. J.—The Board of Health has had preliminary plans prepared by Goldberger & Greisen, Arch., for the construction of an isolation hospital.

Ridgewood, N. J.—An election will be held Apr. 10 for the purpose of voting on the appropriation of $250,000 in bonds. The proceeds will be used for the construction of a three-story high school. Hadley Ford is Clk. of Bd. of Education. Noted Dec. 24.

+West New York, N. J.—(Weehawken post office)—The Public Service Electric Co. has awarded the contract for the construction of an office building on Bergenline Ave. to GEORGE W. CRANWELL & SON, West Hoboken, at about $53,000.

Allentown, Penn.—Plans are being prepared by Robert Rathburn, Arch., Hunsicker Bldg., for the construction of a three-story courthouse for Lehigh County. The estimated cost is $500,000.

+Bellowsville, Penn.—(Monaca post office)—The contract for the construction of the Beaver County building has been awarded to the LEY CONSTRUCTION CO., 1001 Park Bldg., Pittsburgh, at $96,890. Noted Mar. 25 and under Beaver Falls, Penn., Mar. 4.

Dickson City, Penn.—Plans have been prepared by John Howley, Arch., Scranton, for the construction of a 110x112-ft. school in the First Ward. Estimated cost, $75,000. Elmer Slocum is Dir. of School Bd. Noted Mar. 18.

+East Liberty, Penn.—TOUPET BEIL & CONLEY, Oliver Bldg., Pittsburgh, has been awarded the contract for the construction of a two-story, 100x131-ft. building on Penn Ave. and Whitfield St. for Henry Laughlin. Estimated cost, $70,000.

Edwardsville, Penn.—(Wilkes-Barre post office)—Plans have been prepared by J. A. Boyle, Arch., Bennett Bldg., Wilkes-Barre, for the construction of a two-story, 75x120-ft. high school. The estimated cost is $50,000.

+Erie, Penn.—The contract for the construction of the $100,000 building for St. Andrews Church at Seventh and Raspberry St. has been awarded to KIRSCHNER BROS., at $86,000. Noted Aug. 13.

Farrell, Penn.—The Farrell Commercial Club will organize a company to construct a $100,000 department store on Haywood St. between Broadway and the Pennsylvania Station. S. H. Kesminsky is interested.

Pen Argyl, Penn.—The Y. M. C. A. in coöperation with the Lehigh & New England R.R. will construct a building.

Philadelphia, Penn.—Plans are being prepared by J. Horace Cook, Arch., for the construction of an eight-story, 80x100-ft. administration building on the Parkway, for the Board of Education.

Philadelphia, Penn.—Plans are being prepared by E. T. Durang, Arch., 12th and Chestnut St., for the construction of a group of buildings at Cedar Ave. between 53rd and 54th St. for the Miserecordia Hospital. The estimated cost is $1,500,000.

+Philadelphia, Penn.—CHARLES SEYBOLD, JR., Clementon, N. J., has been awarded the contract for the construction of a hotel on Delaware Ave. and Pine St. for William J. McClain.

Pittsburgh, Penn.—F. C. Sauer, Arch., 804 Penn Ave., has prepared plans for the construction of a five-story building for Lodge No. 11, B. P. O. E. The estimated cost is $150,000. Noted Feb. 11.

Pittsburgh, Penn.—According to press reports the Board of Education will receive bids again for the construction of the Schenley High School. The contract for this work was awarded to J. L. Stuart, Pittsburgh, but the Supreme Court has ruled that this contract is invalid. Noted Oct. 22 and Nov. 19.

Pittsburgh, Penn.—Preliminary plans have been prepared by George S. Orth & Bro., Arch., for the construction of the three-story Homewood-Brushton High School at Murtland Ave. and Monticello St. The building when complete will cost $700,000, but only $265,000 will be expended at present. Noted Mar. 4.

+State College, Penn.—The contract for the construction of a 2½-story, 25x125-ft. building with a 25x60-ft. wing, for the Phi Gamma Delta Fraternity, State College, has been awarded to HENRY L. BROWN, 1714 Sansom St., Philadelphia. Estimated cost, $40,000.

Warren, Penn.—Contracts will soon be awarded for the construction of a two-story library. Estimated cost, $80,000. Noted Feb. 11.

Washington, D. C.—Frank G. Pierson, Arch., Washington Loan & Trust Bldg., has prepared plans for the construction of a one-story, 240x340-ft. convention hall for the Washington Convention Hall Co. Estimated cost, $250,000.

Baltimore, Md.—Preliminary plans are being prepared by Wyatt & Nolting, Arch., Keyser Bldg., for the construction of a hotel for the Baltimore Hotel Co. Estimated cost, $200,000. Jacob Epstein, 200 West Baltimore St., is interested.

Baltimore, Md.—Bids will soon be received by Henry W. Webb, Pres. of Northern Amusement Co., Title Bldg., for the construction of a theater. The estimated cost is $125,000. Oliver B. Wright, 1008 Munsey Bldg., is Arch. Noted Feb. 11.

Baltimore, Md.—Plans are being prepared by Theodore Wells Pietsch, Arch., for the construction of a building at Charles St. and University Parkway for the North Baltimore Methodist Episcopal Church. The estimated cost is $200,000.

Macon, Ga.—The Macon Terminal Co. has been petitioned by the Georgia Railroad Commission to prepare plans by Sept. 1 for the construction of the Union Passenger Depot at Cherry near Fifth St. Estimated cost, $1,500,000.

Macon, Ga.—The citizens have voted $150,000 in bonds for the construction of a hospital at Macon.

Birmingham, Ala.—A. R. Boone and associates plan to construct a 2½-story motion picture theater on Second Ave. between 19th and 20th St. The estimated cost is $50,000. H. B. Wheelock is Arch.

Knoxville, Tenn.—Bids are being received by Miller, Fullenwider & Dowling, Arch., 6 North Michigan Ave., Chicago, Ill., and by Alfred B. Baumann, Assoc. Arch., Knoxville, for the construction of a two-story library for the Lawson-McGhee Estate. L. D. Tyson is Pres. Bd. of Trustees. Estimated cost, $55,000. Noted May 14, 1914.

+Akron, Ohio—The contract for the construction of an addition for the Akron Hotel Co., Main and Market St., has been awarded to the CARMICHAEL CONSTRUCTION CO., 526 Hamilton Bldg. Estimated cost, $40,000.

Alliance, Ohio—Plans are being prepared by W. W. Matchett, Arch., 537 East Main St., for the construction of a two-story, 47x120-ft. theater and store building. Estimated cost, $45,000.

Columbus, Ohio—The Guarantee Title & Trust Co., 316 South High St., plans to construct a six-story bank and office building. Estimated cost, $200,000. George L. Gugle is Secy.

+East Cleveland, Ohio—The contract for the construction of a $50,000 library has been awarded to JAMES H. WELLS CO., Scranton Rd., Cleveland. Noted Jan. 21 and Feb. 25.

Salem, Ohio—The Masonic Lodge plans to construct a two-story temple. Estimated cost, $40,000. J. G. Augustine is Chn. of Bldg. Com.

+Toledo, Ohio—A. BENTLEY & SON, 201 Belmont Ave., has been awarded the contract for the construction of a five-story hotel for the Commonwealth Building Co. Estimated cost, $40,000.

Wellsville, Ohio—The First Methodist Episcopal Church plans to construct a building at Union and Fifth St. Estimated cost, $80,000. Noted Sept. 24.

Youngstown, Ohio—Plans are being revised by Stanley & Schelble, Arch., 1301 Wick Bldg., for the construction of a five-story, 58x144-ft. Y. W. C. A. building. Estimated cost, $40,000. Mrs. E. F. Moore, 225 West Rayen St., is Gen. Secy.

Bloomington, Ind.—Preliminary plans are being prepared by R. P. Daggett & Co., Arch., 956 Lemcke Annex, Indianapolis, for the construction of a one-story, 100x200-ft. gymnasium for the Indiana University. Estimated cost, $150,000. J. W. Cravens is Secy. of University. Noted Mar. 25.

Indianapolis, Ind.—Bids will soon be received by Rubush & Hunter, Assoc. Arch., 428 American Central Life Bldg., for the construction of a four-story Masonic Temple for the F. & A. M. Estimated cost, $50,000. J. J. Twiname is Chn. of Bldg. Com.

Portland, Ind.—The County Council has appropriated $70,000 for the construction of a county courthouse. The estimated cost is $250,000.

Chicago, Ill.—Plans are being prepared by Holabird & Roche, Arch., 104 South Michigan Ave., for the construction of a four-story armory for the First Cavalry I. N. G. The estimated cost is $200,000.

Chicago, Ill.—Plans are being prepared by Davidson, Lockwood & Morgan, Arch., for the construction of a three-story building. Estimated cost, $250,000. Patterson & Davidson, 53 West Jackson Blvd., is Engr.

Chicago, Ill.—Plans have been prepared by Huehl, Schmid & Holmes, Arch., 154 West Randolph St., for the construction of a two-story, 50x125-ft. building for Eitel Bros., Grace and North Halstead St. Estimated cost, $175,000.

Ottawa, Ill.—Bids will soon be received by William B. Ittner, Assoc. Arch., Ninth and Locust St., St. Louis, Mo., for the construction of a two-story high school. Estimated cost, $200,000. Charles F. Kingman, Ottawa, is Secy. of Bd. of Education. Noted Feb. 4 and 18.

Milwaukee, Wis.—Bids will be received about Apr. 15, by Kirchoff & Rose, Arch., 1312 Majestic Bldg., for the construction of the Palace Hippodrome Theater. It will be four stories, 150x250-ft. and will cost about $350,000. Noted Mar. 4 and 11.

Des Moines, Iowa—The Adelphi Temple Association, 1168 24th St., contemplates the construction of a lodge building. Estimated cost, $50,000.

Primghar, Iowa—Plans are being prepared by Smith & Keffer, Arch., 610 Youngerman Bldg., Des Moines, for the construction of a three-story, 77x116-ft. courthouse for O'Brien County. The estimated cost is $150,000. J. B. Stamp is Audr.

Rock Rapids, Iowa—Plans are being prepared by Smith & Keffer, Arch., 610 Youngerman Bldg., Des Moines, for the construction of a three-story courthouse for Lyon County. Estimated cost, $120,000. E. J. Riegel is Audr.

Spencer, Iowa—The Masonic Association plans to construct a $50,000 temple at Spencer.

Minneapolis, Minn.—C. E. Bell, Arch., 310 Security Bank Bldg., has prepared plans for the construction of a 12-story hotel on Second St. and Hennepin Ave. for the Union City Mission. The estimated cost is $440,000. Noted Dec. 31.

Marysville, Kan.—(Official)—Bids will be received until Apr. 7 by D. P. Armstrong, Clk. Bd. of Education, for the construction of a school. The estimated cost is $45,000. Noted Mar. 18.

Omaha, Neb.—Bids are being received by W. R. Stockham, Arch., 426 Ramge Blk., for the construction of a four-story, 70x132-ft. hotel to be known as Hotel Edwards for the Independent Realty Co., 315 Karbaugh Blk. Estimated cost, $100,000.

Rapid City, S. D.—Plans are being prepared by J. P. Eisentraut, Arch., for the construction of a three-story, 65x65-ft. bank and office building for the Merchants Loan & Trust Co. The estimated cost is $40,000.

ADDITIONAL WATER-SUPPLY

Salem, Mass.

Bids were received Mar. 10 by the Salem and Beverly Water-Supply Board for the construction of an additional water supply canal and conduit from the Ipswich River from: (A) Engineer's Estimate; (B) McHarg-Barton Co., 171 Madison Ave., New York, N. Y.; (C) F. T. LEY & CO., INC., Springfield (awarded contract); (D) Thomas Fitzgibbon Co., Beverly; (E) Bay State Dredging Co., Boston; (F) W. B. Mullen, Boston; (G) Coleman Bros., Boston; (H) Middlesex Contracting Co., Boston; (I) M. Russo & Son, Boston; (J) T. A. Scott & Co., Inc., New London, Conn. (K) L. B. Cleveland, Watertown, N. Y.; (L) Bonfidio Perini, Ashland; (M) Holbrook, Cabot & Rollins, Boston; (N) Eastover Construction Co., Utica, N. Y.; (O) John J. Hart, New York; (P) Bruno & Petitti, Boston; (Q) W. L. Miller and J. J. Welch & Co., Salem; (R) Canal Construction Co., New York. The item bids were as follows:

	A	B	C	D	E	F	G	H	I
110,000 cu.yd. canal excavation	$0.25	$0.11	$0.15	$0.18	$0.22	$0.24	$0.26	$0.26½	$0.28
Dredge	10,000.00	12,000.00	7000.00	7000.00	6325.00	5500.00	8250.00	7800.00	8500.00
9000 cu.yd. general excavation	1.00	0.60	1.00	0.85	0.70	1.60	0.85	0.80	0.60
275 cu.yd. concrete	10.00	7.00	8.50	11.25	11.00	10.50	8.25	9.00	9.50
6000 lb. steel reinforcing	0.05	0.03	0.04	0.03	0.05	0.04½	0.03	0.05	0.02½
1430 ft. conduit	7.00	5.00	5.00	5.87	5.50	4.50	6.00	5.80	6.50
420 ft. 36-in. c.i. pipe on piles	4.00	2.00	5.80	3.22	2.50	2.50	4.00	3.90	3.25
1020 ft. vitrified or concrete pipe	4.00	3.25	2.90	3.37	3.35	3.75	3.50	4.25	3.60
Pumping station	4000.00	2500.00	1575.00	1975.00	3500.00	2580.00	3000.00	2800.00	3050.00
150 sq.yd. paving	1.50	0.80	1.25	1.21	1.50	1.00	3.00	2.00	1.60
Construction under roadways	1000.00	1000.00	75.00	400.00	200.00	100.00	500.00	500.00	200.00
Appurtenances	2000.00	1000.00	1500.00	1178.00	925.00	1000.00	1000.00	1200.00	800.00
Extended totals	$72,545	$47,530	$50,959	$54,642	$57,332	$64,598	$65,729	$65,992	$66,085

	J	K	L	M	N	O	P	Q	R
110,000 cu.yd. canal excavation	$0.39	$0.24	$0.35	$0.20	$0.30	$0.27	$0.40	$0.44	$0.42
Dredge	8500.00	12,000.00	12,000.00	15,500.00	10,000.00	16,000.00	10,000.00	9500.00	10,800.00
9000 cu.yd. general excavation	0.70	1.50	0.70	1.54	1.00	1.90	1.00	1.10	2.20
275 cu.yd. concrete	7.00	12.00	10.00	10.00	10.00	8.20	10.00	12.00	8.77
6000 lb. steel reinforcing	0.04	0.05	0.03½	0.05	0.03	0.05	0.05	0.06	0.044
1430 ft. conduit	4.60	4.75	7.00	6.75	7.50	5.67	7.00	7.75	7.51
420 ft. 36-in. c.i. pipe on piles	3.50	5.00	3.50	5.36	4.50	4.20	4.50	5.00	5.07
1020 ft. vitrified or concrete pipe	3.30	3.50	3.25	4.50	4.25	5.80	4.00	4.50	6.15
Pumping station	1800.00	2500.00	1100.00	2310.00	5000.00	1195.00	6000.00	4600.00	2425.00
150 sq.yd. paving	1.00	2.50	2.00	0.60	1.00	1.50	1.00	2.00	1.60
Construction under roadways	100.00	2000.00	200.00	3000.00	600.00	100.00	50.00	600.00	715.00
Appurtenances	950.00	1500.00	900.00	2000.00	2000.00	1500.00	500.00	1500.00	2250.00
Extended totals	$74,279	$74,337	$77,055	$78,304	$79,630	$84,163	$88,730	$96,232	$104,247

Douglas, Wyo.—(Official)—Bids will be received until 10 a.m., Apr. 20, by the County Commission for the construction of a $40,000 county courthouse. W. N. Bowman, 915 Central Savings Bank Bldg., Denver, Colo., is Arch. Noted Mar. 18.

Butte, Mont.—(Official)—(Correction)—The construction of the $250,000 depot on Montana St. for the Chicago, Milwaukee & St. Paul Ry. will not be started this year. C. F. Loweth is Ch. Engr. Noted Mar. 18.

✚Great Falls, Mont.—The contract for the construction of a Y. M. C. A. building has been awarded to the LANGE CONSTRUCTION CO., at $73,550. G. H. Shanley is Arch. Noted Oct. 8.

Chaffee, Mo.—Bids will soon be received by John Jacob Astor, Chaffee, for the construction of a five-story, 70x120-ft. hotel. Estimated cost, $100,000. J. W. Matz, 314 Nasby Bldg., Toledo, Ohio, is Arch.

St. Joseph, Mo.—The St. Joseph Amusement Co. contemplates the construction of a $100,000 theater. Carl Boller, 7 Gayety Theater Bldg., Kansas City, is Arch. C. V. Philley is interested.

Little Rock, Ark.—Bids will be received about Apr. 20 by Mann & Stern, Arch., for the construction of a two-story, 140x140-ft. club house for the Mutual Realty Co. The estimated cost is $45,000.

Pocatello, Idaho—Bids will soon be received by Sollio, Boyer & Rogers, Arch., for the construction of the Yellowstone Hotel. The estimated cost is $300,000. Noted Nov. 19.

Seattle, Wash.—Bids will be received about Apr. 5 for the construction of a two-story addition to the Lowell School at 12th and Federal Ave. Estimated cost, $60,000. Edgar Blair is School Arch.

Seattle, Wash.—Bids will be received about Apr. 15 by Edgar Blair, School Arch., for the construction of two 40x60-ft. wings to the B. F. Day School. The estimated cost is $55,00.

✚Sedro Woolley, Wash.—The contract for the construction of a two-story, reinforced-concrete library has been awarded to D. DALTON. Estimated cost, $50,000.

Portland, Ore.—The Failing Estate plans to rebuild its three-story building recently destroyed by fire with a loss of $60,000.

A Mysterious Land Purchase—A purchase of a tract of land, involving $1,000,000, and ostensibly for manufacturing purposes, has been made at Orangeburg, N. Y., a small manufacturing town on the West Shore R.R., 21 miles from New York. A. A. McCrary, who in past years has acted as agent in purchasing sites for various large corporations, has been employed for the past two years in securing properties in this town and vicinity. The land already taken over has deep water facilities at the Hudson, frontage on the West Shore R.R., Erie R.R. and Northern Railroad of New Jersey. Speculation has been rife as to the purpose of this purchase but the operations have been of the most secret nature. McCrary has not committed himself further than stating that one of the largest industrial plants in this country will be located there, and that within two years 6000 men will be employed. It has been rumored that the Bethlehem Steel Corporation had made the purchase for the treatment of its Chilean and Cuban Ores. Charles M. Schwab, president of that company, however, denies any knowledge of the under taking. Another theory set forth was that such a spot was ideally situated for a plant to treat the Adirondack ores. But all corporations which might be interested in this plant have flatly denied any such intention. It has also been suggested that the Standard Oil Co. might be considering the establishment of a refinery at that point, a pipe line passes the site of the New York Transit Co. Over $1,000,000 has been paid out for this land which intrinsically is not worth one-quarter of that amount and it would seem that the chief motives were the railway facilities together with deep water frontage.

An Enormous Aëroplane Order—It is estimated that an order for aëroplanes for war purposes, placed by the Italian Government with the Curtiss Aëroplane Co., Hammondsport, N. Y., will amount to several million dollars. The specifications call for aëroplanes of 100 hp. with both pontoons for sea services and with wheels for land work. The aëroplanes will be so constructed that bomb-dropping devices and a gun may be attached. Each aëroplane is capable of sustaining a load 400 lb. The cost of each is $7500. Cap. Carlos Pfister of the Italian Navy, 161 Madison Ave., New York, N. Y., is representative of the Italian Government in connection with the work.

The C. H. & E. Mfg. Co., Milwaukee, Wis., manufacturer of contractors' supplies, announces that in March it will occupy its new factory. This is a two-story building of mill-construction, with 36,000 sq.ft. of floor space.

RUSSIA

Improving Russian Railways—The narrow-gage lines of Russia have, in many places, outlived their usefulness. The "London Times" tells of changing conditions in a recent issue as follows:

"The existing railway between Vologda and Archangel has very small transport capacity owing to its narrow gage. When increased traffic began on the Vologda-Archangel line it was necessary to take a certain number of cars from the narrow-gage Ryazan Ry., but these proved insufficient, and now, to increase the rolling stock, 30 locomotives of the Mallet type and 500 cars have been ordered for the narrow gage.

"At the present work has begun on the construction of a broad-gage railway almost parallel to the existing narrow-gage line from Vologda to Niandoma, a length of 300 versts (199 miles). Niandoma is situated half way between Vologda and Archangel. At the end of July (old style), 1915, the new Vologda-Niandoma Ry. will be finished and regular traffic will be opened on it, when it will be possible to concentrate on the Niandoma-Archangel section all the rolling stock that is now working on the narrow-gage Vologda-Archangel line, which will double the transport capacity of the road. There is ample rolling stock for the new broad-gage Vologda-Niandoma Ry.

"The topographical conditions in the railway zone are not favorable, there are many swamps, and it is estimated that the construction of the railway, with bridges and station buildings, will amount to $6,180,000, at the rate of $31,076 per mile. The work is being carried on with great energy, notwithstanding the winter, 30 engineers and a proportionate number of laborers being engaged. It is proposed to build all the bridges in the winter and complete excavation work where the dry, unfrozen ground permits.

"By agreement between the Ministers of Ways of Communication and of Finances it has been decided to construct a railway from Petrozavodsk to the town of Kem, an ice-free port situated on the shore of Onezh Bay, a distance of 380 versts (252 miles). The sum of $41,200 has been appropriated for the survey, which will be carried out rapidly, in order that the work of construction may begin during the current winter.

"Both the survey and construction will be superintended by the former head of the Warsaw-Vienna Ry., Engineer Pauker, now Chief of the Railway Construction Bureau. It is anticipated that it will be possible to run the first train in the winter of 1915. The cost of construction is estimated at $10,815,000. Later it is proposed to extend the line to the Murman coast.

"The task of surveying and building this new line is complicated by the unexplored nature of the locality through which it will have to pass. Furthermore, the fact that the survey is to be made in winter gives rise to fears lest the results should not correspond to the actual situation. Nevertheless, considering the great importance of the road—it will form an outlet for Russian trade independent of war conditions—it has been decided to construct it as far as possible without delay."

The Sandusky Portland Cement Co. announces that Henry C. Morrison is Western Representative of the company with offices at 710 Railway Exchange Bldg., St. Louis. He will be glad to take up problems of waterproofing with any one interested, having devoted the last four years to successful waterproofing for some of the large structures in the United States and Canada.

The Stark Rolling Mill Co., Canton, Ohio, announces the appointment of the Dearborn Steel & Iron Co. as its selling agent in Chicago. The latter company was formed by H. C. Perrine and E. L. Lyon and the office will be in the Peoples Gas Bldg., Chicago.

PAVING, PUEBLO, COLO.

✚Bids were received Feb. 15 by the City Council for the improvement of the "Mineral Palace Paving District." Bids were submitted on both a bond and a cash basis, but the accompanying table gives the price for cash. The bidders were: (A) R. P. McDonald Construction Co., Denver; (B) J. A. Laughlin, Trinidad; (C) Campbell Construction Co., Pueblo; (D) Two Miracle Construction Co., Great Falls, Mont.; (E) Gaffy & Keefe, Construction Co., Denver; (F) Denver & Pueblo Construction Co., Pueblo; (G) R. Clough & Son, Colorado Springs; (H) ANDERSON-HAMMEL CONSTRUCTION CO., Pueblo (awarded contract); (I) Gordon & Taylor Construction Co., Pueblo; (J) P. C. Croll, Pueblo; (K) Mishou & Millard, Pueblo; (L) Engineer's Estimate. The item bids were as follows:

	A	B	C	D	E	F	G	H	I	J	K	L
2820 lin.ft. 36-in. brick sewer	$3.84	$3.82	$3.93	$3.50	$3.56	$3.92	$3.57	$4.34½	$3.45	$4.10	$4.61	$3.50
2820 lin.ft. 36-in. concrete sewer	3.15	2.80	3.65	3.50	....	3.92	....	4.09	3.20	3.54	4.10	3.50
960 lin.ft. 30-in. brick sewer	3.40	3.47	3.60	2.80	3.16	3.75	3.16	4.01½	3.10	3.84	4.10	2.80
960 lin.ft. 30-in. concrete sewer	2.95	2.23	2.84	2.80	....	3.75	....	3.75	2.80	3.05	3.85	2.80
1266 lin.ft. 27-in. vitrified sewer	2.25	2.42	2.38	2.15	1.90	2.15	2.04	2.20	2.00	2.98	2.30	2.54
1565 lin.ft. 24-in. vitrified sewer	1.75	1.97	1.92	1.60	1.50	1.65	1.68	1.81½	1.60	2.23	1.81	2.09
860 lin.ft. 21-in. vitrified sewer	1.46	1.34	1.47	1.30	1.10	1.24	1.43	1.54	1.35	1.39	1.40	1.62
2630 lin.ft. 18-in. vitrified sewer	1.22	1.29	1.13	0.85	0.85	1.06	1.19	1.21	1.10	1.44	1.24	1.29
3515 lin.ft. 15-in. vitrified sewer	0.90	0.93	0.91	0.66	0.65	0.80	0.96	0.88	0.80	0.99	0.85	1.02
3780 lin.ft. 12-in. vitrified sewer	0.72	0.77	0.71	0.57	0.55	0.62	0.72	0.77	0.65	0.67	0.66	0.84
16,090 lin.ft. 10-in. vitrified sewer	0.60	0.70	0.53	0.51	0.49	0.55	0.53	0.55	0.50	0.45½	0.59	0.70
50 manholes	31.00	51.00	38.50	30.00	25.00	31.00	40.80	36.85	35.00	42.50	38.00	39.00
8 catch-basins, "A"	37.50	50.00	44.71	70.00	30.00	43.00	36.00	36.85	35.00	54.00	50.00	45.00
18 catch-basins, "B"	35.00	50.00	44.71	70.00	29.00	40.00	30.60	36.85	33.00	54.00	50.00	40.00
38 catch-basins, "C"	34.50	49.00	42.28	55.00	29.00	40.00	30.60	36.85	35.00	54.00	50.00	40.00
140 inlets	25.50	21.20	19.50	27.00	20.00	25.00	2.05	20.42	20.00	25.50	20.00	18.00
75 monument boxes	8.00	5.00	5.00	8.00	6.00	8.00	2.05	5.50	9.00	5.50	4.95	5.00
34,250 cu.yd. excavation for pavement	0.37	0.34	0.40	0.28½	0.30	0.36	0.40	0.28⅝	0.38	0.40½	0.40	0.40
104,400 lin.ft. combined curb and gutter	0.50	0.47	0.42	0.45	0.47	0.60	0.59	0.42⅛	0.47	0.46	0.40	0.60
1900 lin.ft. gutter only	0.30	0.30	0.25	0.25	0.37	0.30	0.30	0.23	0.25	0.24½	0.27½	0.30
197,300 sq.yd. gravel pavement	0.25	0.21	0.25	0.20½	0.19½	0.26½	0.26	0.17	0.26	0.25½	0.24⅞	0.27
50 manholes changed	5.00	1.00	0.75	5.00	5.00	8.00	4.10	2.75	5.00	3.05	5.00	2.00
Extended totals, using brick sewer	$162,662	$154,059	$154,387	$141,520	$138,388	$174,276	$169,152	$137,264	$156,644	$163,615	$155,753	$179,580
Extended totals, using concrete sewer	$160,284	$149,992	$151,170	$141,520		$174,276		$136,290	$155,651	$161,278	$154,075	$179,580

SOUTH AMERICA

Construction Machinery in South America—V. L. Havens commercial attaché at Santiago, writes as follows:

In general construction work in Chile, such as ditching, building of dikes and levees, and railway cutting, the material is generally moved by hand, and it seems that there should in time be market for American grading machinery, such as slips, wheelers, road graders, elevating graders, and the dump wagons that ordinarily go with them.

In discussing the possibilities with some of the local houses, the opinion was expressed that there would be a chance to sell American machinery only if there was an American contractor here to buy it. It is not unlikely that they could assist the contractor in finding work to do. Any man who took up the work would have to be personally familiar with the machines in detail and of such experience that he could instruct men in their use, care, and repair. Inasmuch as such machinery occupies considerable space when set up, it would have to be sent in a knocked-down condition and packed in such a way as to permit handling by lighters in a rough sea. The horses in Chile are very good and would be all right for use with the machines, but men who are competent to drive 10 and 14 horse teams are not very numerous. It might be necessary to import a very limited number of skillful drivers from the south or southwest part of the United States who speak Spanish and are familiar with the machines. Men to handle slips and wheelers could be found locally. The import duties are rather high, and it might be found desirable to ship merely the iron parts of the wagons and make the wooden parts locally from the very good native oak. Local shops exist where ordinary repairs to railway construction plants could be made.

Inasmuch as South America is a country of great distances, very much as North America, and as the west coast is very much like the North American coast, except that the timber and heavy rainfall is in the southwest and light rainfall and irrigation country in the northwest, the future development of South America in railway and irrigation is apt to be very similar to that of the western part of the United States.

This is not meant to convey the idea that there is any immediate business or great prizes to be obtained in this field in South America with a small effort. Anything that is accomplished will be accomplished through deep study and hard work, and returns will not be very rapid, owing to the unusually small supply of funds for financing new enterprises at the present time. But the future of the business, I am sure, is important and worthy of consideration, and those who ultimately desire to enter this field should begin their studies and preparations very soon. There is even time for much to be done by correspondence at present, when such a slow process could not be followed in busy times.

The Northern Chemical Engineering Laboratories announce the shorter name of "C. F. Burgess Laboratories." The new name implies no change in management or ownership. C. F. Burgess will continue as President, with offices at Madison, Wis.

The Burd High Compression Ring Co. has moved its offices from the Masonic Temple to 307 South Main St., Rockford, Ill.

The McCombs Engineering Co., Cameron, Tex., would like to receive catalogs and quotations on automatic devices for discharging sewage from the dosing chamber to the filter beds in disposal plant.

The Wyckoff Pipe & Creosoting Co., Inc., has removed its offices from 50 Church St. to the Forty-Second St. Bldg., 30 East 40th St., New York, N. Y.

The Federal Bridge Co., Waukesha, Wis., is the new name of the Modern Steel Structural Co., which has been in business for several years. C. J. McIntosh is Pres. and G. A. Haynes is Ch. Engr.

To Build "Rocmac" Roads—The Philadelphia Quartz Co., 121 South Third St., Philadelphia, has undertaken the construction of broken-stone roads with "Rocmac" binder. This is a proprietary compound composed of "silicate of soda, sugar, powdered limestone and other ingredients," the exact preparation of which is kept a trade secret. The materials used in construction are "Rocmac" binder, limestone dust and crushed stone. There are two processes of construction, by mixing the binder with the aggregates, or by applying the binder as a penetration coating. The "Rocmac" matrix or mortar used in the penetration method is defined as a special solution thoroughly mixed with limestone dust in the proportion of 36 gal. of solution to 1 cu.yd., enough water being added to give the matrix a consistency to work uniformly. For the mixing method the same matrix is used in the same proportions. In rolling the surface is slightly sprinkled to facilitate the puddling of the matrix. The foundation and stone aggregates are the same as specified for all broken stone road surfaces, except that a hard tough limestone seems to be preferred. The quantity of stone in the usual proportions is given as 2½ parts of 2-in. stone to 1 part of limestone screenings.

ASHBY RESERVOIR, FITCHBURG, MASS.

✚Bids were received Mar. 2 by the Water Commissioners, Fitchburg, Mass., for the construction of the Ashbey Reservoir from: (A) E. W. FOLEY CONTRACTING CO., Erie, Penn. (awarded contract); (B) International Construction Co., Boston; (C) Hassam Paving Co., Worcester; (D) De Onfro Bros., Leominster; (E) P. Perini, Ashland; (F) Barrally & Ingersoll, Rochester, N. Y.; (G) Joseph Long & Co., Leominster; (H) Russo & Parker Construction Co., Hudson, N. Y.; (I) R. F. Hudson, Melrose; (J) Doolittle & Garland, Kent, Ohio; (K) Coleman Bros., Boston; (L) Bruno & Petitti, Boston; (M) F. B. Beasman & Co., Baltimore, Md.; (N) F. A. Gammino, Providence, R. I.; (O) Cenedella & Co., Milford; (P) R. H. Newell Co. and N. S. Brock, Uxbridge; (Q) C. W. Blakeslee & Sons, New Haven, Conn.; (R) H. P. Cummings Construction Co., Ware; (S) Fraser, Brace & Co., New York, N. Y.; (T) John Marsh, Southbridge. The item bids were as follows:

ASHBY RESERVOIR

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
90 acres clearing	$40.00	$40.00	$50.00	$100.00	$40.00	$20.00	$35.00	$75.00	$100.00	$50.00	$100.00	$30.00	$35.00	$100.00	$50.00	$50.00	$120.00	$57.00	$10.00	$150.00
60 acres grubbing	85.00	150.00	100.00	100.00	90.00	55.00	100.00	150.00	50.00	100.00	200.00	90.00	70.00	50.00	100.00	175.00	120.00	220.00	130.00	550.00
Disposal of loose stumps, etc. (lump sum)	250.00	800.00	400.00	1000.00	1500.00	1000.00	1500.00	1000.00	1000.00	500.00	500.00	1000.00	6000.00	1500.00	700.00	850.00	3000.00	1000.00	1650.00	50.00
400 cu.yd. earth excavation	1.00	0.30	0.50	1.00	0.50	0.70	0.75	0.75	1.00	1.00	1.00	0.80	1.00	0.75	0.80	1.00	1.25	0.55	0.60	1.00
19,000 cu.yd. loam excavation	0.40	0.35	0.50	0.50	0.50	0.60	0.70	0.47	0.40	0.65	1.50	0.60	0.65	0.75	0.65	0.90	0.75	0.80	0.65	0.75
3200 cu.yd. earth excavation, 0 to 10 ft. deep	0.80	1.25	0.75	1.00	0.75	1.40	0.85	0.65	1.00	1.50	0.60	2.00	1.48	1.00	2.00	1.70	1.70	1.15	3.37	3.25
2300 cu.yd. earth excavation, 10 to 24 ft. deep	1.00	1.70	1.75	2.00	1.50	3.00	2.25	1.50	2.00	2.00	1.25	3.00	2.98	2.50	4.00	2.75	2.20	2.10	5.95	6.75
800 cu.yd. earth excavation, 24 to 36 ft. deep	1.50	2.75	2.50	3.00	4.00	3.50	6.00	3.50	3.00	3.00	2.00	5.00	4.98	5.00	4.80	3.00	3.25	3.45	6.62	8.40
21,300 cu.yd. earth excavation for dam and dike	0.60	0.75	0.60	0.50	0.47	0.50	0.50	0.60	0.60	0.60	2.00	0.60	0.65	0.70	0.70	0.50	0.70	0.80	0.83	0.42
5600 cu.yd. earth excavation for road construction	0.50	0.50	0.50	0.50	0.47	0.70	0.42	0.50	1.00	0.60	0.50	0.45	0.46	0.50	0.95	0.55	0.55	0.45	0.45	0.45
1900 cu.yd. earth excavation for roads and fills	0.50	0.50	0.60	0.50	0.50	0.60	0.45	0.50	1.00	0.60	0.50	0.45	0.54	0.50	0.60	0.50	0.51	0.45	0.75	0.45
100 cu.yd. earth excavation for drainage ditches	1.00	0.75	0.60	0.50	0.50	0.60	0.50	0.50	1.00	0.50	0.50	1.00	1.05	1.00	1.50	0.50	2.20	2.00	0.85	0.35
2200 cu.yd. rock excavation for dam and dike	1.25	1.70	1.75	1.50	3.00	2.00	3.70	2.50	2.00	1.25	1.60	2.00	1.05	2.50	3.00	2.75	3.50	4.00	0.96	0.80
4660 cu.yd. rock excavation for road construction	1.00	1.40	1.50	1.00	1.00	1.75	1.00	1.00	1.00	0.75	1.00	1.00	1.05	1.00	2.00	1.05	2.50	2.00	1.86	0.80
500 cu.yd. removing boulders	1.00	0.70	0.75	0.40	1.00	1.00	0.80	0.55	1.00	1.50	0.90	1.00	1.05	2.00	2.00	1.75	1.50	1.75	1.50	0.80
2100 cu.yd. bond gravel in roads	0.80	1.35	1.50	1.50	1.00	0.80	0.03	0.03	1.00	1.50	0.60	1.00	1.75	1.50	2.00	1.50	1.50	1.75	1.60	0.80
15,000 cu.yd. excavated material hauled	0.03	0.02½	0.02½	0.08	0.03	0.02	0.02	0.03	0.01	0.02	0.02	0.60	1.00	0.03	0.04	1.50	2.25	1.40	0.55	0.50
8700 sq.yd. grassing earth surfaces	0.15	0.02	0.10	0.03	0.10	0.04	0.04	0.11	0.50	0.15	0.10	0.03	0.04	0.03	0.15	0.01¼	0.03	0.03	0.03	0.10
2400 cu.yd. masonry in dam and dike	8.50	9.50	7.25	8.00	7.00	9.00	5.90	7.00	9.00	8.50	8.00	9.50	7.75	9.25	9.00	8.50	7.25	12.00	12.86	10.00
1470 cu.yd. concrete masonry in gatehouse substructure, spillway dams, etc.	7.50	8.00	6.50	7.00	8.50	6.75	6.50	8.00	7.00	8.50	8.00	11.00	8.10	10.00	9.00	12.00	7.00	9.75	9.08	10.00
Use of grouting apparatus (lump sum)	150.00	50.00	150.00	75.00	260.00	1000.00	500.00	500.00	400.00	200.00	100.00	100.00	175.00	500.00	400.00	500.00	400.00	25.00	100.00	100.00
100 cu.ft. cement grout placed	2.50	2.00	2.00	0.50	0.75	1.00	1.00	0.50	0.85	0.20	0.90	1.00	1.00	0.35	1.50	5.00	1.00	1.25	2.40	1.00
179,000 lb. twisted steel reinforcing bars	0.02½	0.04	0.03	0.03	0.04	0.02½	0.05	0.05	0.04	0.03½	0.02½	0.04	0.04	0.04½	0.03	0.03½	0.06	0.03½	0.03	0.03
30 lin.ft. 16-in. pipe	1.00	0.20	0.40	1.00	0.75	0.75	0.50	0.35	0.50	0.75	0.75	1.00	0.75	1.00	0.70	0.50	1.00	0.40	0.40	0.43
1270 lin.ft. 24-in. pipe	1.00	0.75	0.55	1.00	1.25	0.35	0.50	0.35	0.60	0.75	2.00	1.00	0.75	1.00	0.80	1.00	2.00	0.40	1.52	0.86
6300 sq.yd. medium stone paving	1.00	0.20	0.50	0.70	1.10	1.00	0.70	0.95	1.00	0.75	1.00	1.25	1.55	1.25	1.25	1.00	1.00	1.15	1.00	1.00
50 sq.yd. medium stone paving	1.00	0.35	1.00	0.90	1.50	1.50	1.25	2.00	2.00	0.75	2.00	1.25	1.55	1.25	2.00	1.35	1.25	1.80	1.60	1.50
1900 sq.yd. heavy stone paving	1.25	0.45	1.50	1.00	2.00	2.50	2.50	2.00	1.50	2.50	1.00	1.75	1.70	1.50	2.50	3.25	2.00	2.00	1.86	2.00
Superstructure of gatehouse (lump sum)	500.00	900.00	650.00	400.00	300.00	500.00	500.00	800.00	500.00	450.00	1000.00	1000.00	400.00	900.00	2000.00	600.00	500.00	557.00	451.00	750.00
20,000 ft. b.m. 4-in. creosoted sheet piling	60.00	0.60	45.00	60.00	70.00	90.00	95.00	60.00	50.00	60.00	80.00	80.00	80.00	60.00	100.00	125.00	100.00	80.00	57.40	70.00
2000 lin.ft. wooden rail fence	0.35	0.30	0.30	0.40	0.30	0.30	0.18	0.30	0.25	0.35	0.40	0.45	0.45	0.30	0.35	0.30	0.25	0.22	0.21	0.18
Setting iron work (lump sum)	250.00	150.00	100.00	300.00	200.00	100.00	150.00	300.00	100.00	150.00	300.00	100.00	150.00	200.00	500.00	200.00	100.00	50.00	210.00	500.00
Removing stone, timber and iron work (lump sum)	250.00	400.00	150.00	1500.00	750.00	500.00	1200.00	1000.00	500.00	200.00	500.00	300.00	1100.00	1000.00	2500.00	1000.00	1200.00	900.00	700.00	1250.00
Stream control during construction (lump sum)	500.00	500.00	200.00	1000.00	500.00	2000.00	2750.00	1000.00	1000.00	1000.00	1000.00	1000.00	5000.00	1000.00	500.00	1500.00	3000.00	3300.00	1800.00	1000.00
Extended totals	$99,105	$104,964	$107,135	$111,566	$113,858	$115,464	$117,437	$119,139	$120,597	$121,455	$125,710	$127,722	$134,290	$137,462	$137,489	$139,336	$153,883	$154,997	$156,117	$178,961